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MEDICINE and SURGERY

C. S. BRIGGS, A.M., M.D.
EDITOR and PROPRIETOR

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CHARLES S. BRIGGS, A. M., M. D., Editor

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Original Communications

TREATMENT OF EXTENSIVE OEDEMA IN CHRONIC NEPHRITIS.*

(Translated from *Journal de Medicine et de Chirurgie Practique*, December, 1913.)

By W. T. BRIGGS, M.D., Nashville, Tenn.

It is not unusual, in hospital as in private practice, to meet with patients who, having suffered for a long time with chronic nephritis of uræmic type and dropsical manifestations, present all the clinical symptoms of asystolic patients of cardiac origin with which they have for a long time been confused, for there is present a marked hypertension, a dilated heart which, after having developed a bruit, has gradually weakened and with intermissions, give signs of mitral valve lesion. The right side of the heart in its turn becomes dilated, and there is then manifested the symptoms of asytole with general œdema.

What is the best treatment of this œdema? It is, according to Prof. Castaigne, by the method of puncture of Sonthey as demonstrated in a recent lecture at the Beanjon Hospital. When cases of asystole of renal origin complicated with extensive œde-

*Clinical lecture, by Dr. C. Castaigne, service of Prof. Debove.

ma is met with it is the custom to exhibit in their treatment the orthodox routine, that is to say, absolute rest in bed, exclusive milk diet, drastic purgation and then digitalis. Now these patients are not only asystolic but they have almost impermeable kidneys, as is easily shown by the employment of methylene blue and the treatment that is employed in these cases forces an abrupt entrance into the circulation of at least four or five kilos of a liquid, and a liquid of a very particular chemical composition, for it is essentially saline, as has been shown by Widal. This liquid is also extremely toxic, the result of the absorption of toxic substances, which the kidneys being unable to eliminate become fixed in the tissues as an isotonic liquid, that is to say, salt.

Then in forcing all this saline and toxic matter into the circulation, the patient is poisoned, as shown in a series of cases cited by Castaigne. The first asystolic patient treated at the hospital with digitalis and the customary regime, showed subsidence of the œdema and an increase of urinary secretion, but almost immediately afterward high delirium supervened and death ensued in spite of a double phlebotomy and lumbar puncture.

These well marked accidents are relatively rarely met with, but analogous cases are very often seen following this treatment. The second case indeed concerns a uræmic nephritic who had for a long time suffered from an œdema and hyposytolic condition.

In such instance the classical treatment brought about absorption of the œdema, but the patient was almost at once seized with the Cheyne-Stokes type of respiration and wild delirium. It may be claimed that these symptoms were produced by the medicine and not by the absorption of their secretions. Proof to the contrary is easily obtained as was done in a case on hand in which the method of Huchard was employed, which consists in the application of an elastic bandage to both inferior extremities from the toes upward without giving any medicine at all. The patient absorbed his œdema and was at once taken with Cheyne-Stokes respiration and delirium, showing that the fluids alone were the cause of these accidents.

These facts have been noted for a long time among others by Andeal, Louis, Monod, etc. More recently, at the medical socieety

of hospitals, Merklen and Jean Heitz have reported a great number of cases as also a Russian author.

We have a right, in the presence of similar cases, of drawing the conclusion that the ideal treatment of patients so affected, is puncture, a process for a long time recognized but to which recourse was had, at least in the medical service of hospitals, only in cases almost moribund when medicines are no longer of avail. The explanation of the hesitation in resorting to puncture was that it was thought to produce a lesion of the skin which gave entrance to infection due either to the staphylococcus or to the streptococcus. The reluctance is reasonable when resort is had to scarification or to points of application of actual cautery covered with a thick layer of cotton wool, but if the punctures are made with small drains, a method which has been adopted and practiced by the English physician, Southey, all these complications may be avoided.

Canulated platinum tubes of the size of a large needle are used To these are adjusted, when inserted into the tissues, small rubber tubes which are carried into a vessel by the side of the bed. The patients, according to their tolerance, can keep these tubes in place for 24, 36 or 48 hours. After removal a simple antiseptic dressing is applied to the small wounds. This method demonstrated its great value in a third observation which was recorded. The patient was a man of 58 years who for a long time had been affected with chronic nephritis complicated with all the usual symptoms that occur in slight uræmic poison for the relief of which he had been subjected to venesection. Having failed to follow out closely the regime prescribed for him he reëntered the hospital in a state of hyposystole. Liquid diet, drastic purgation, and digitalis caused him to lose 8 to 10 kilos in several days, but every time he was submitted to this treatment he was affected with somnolence, with mild delirium, difficult breathing, etc., so much so that his condition became worse from week to week.

Then M. Castaigne applied to him the method of Southey and the following was the result. At first ten tubes were inserted in each inferior extremity, which were maintained in place 48 hours. During this time there was discharged ten litres of fluid without

bringing about any of the usual accidents. The tubes were left out for 8 days following, but from this time without giving him any medicine the patient passed from 1000 to 1200 cubic centimetres of urine, whereas before, under the use of the bromine, the patient passed only from three to four.

For ten days the patient did not increase in weight, however, before the results were reached the Southey tubes were replaced and there was obtained in 48 hours 8 litres of liquid. The œdema had completely disappeared.

For two months the patient who before had continually been under the influence of medicine for the relief of the asystolic symptoms, and had continually marked œdema, now had no longer any œdema, not even the slightest, although he had taken no medicine.

How can the different results of these two methods be determined? First, because it had not been determined that toxic accidents happened as the result of abruptly introducing into the circulation of a toxic and saline liquid. Second, in reducing considerably the mechanical resistance in the peripheral circulation which is produced by the œdema itself. This loss of resistance with the patient is very interesting to demonstrate by investigating the arterial tension which shows after puncture a decided lowering of the tension. With the last patient, for example, there was obtained by other treatment only a minimum reduction in the tension of 17. Now, immediately after puncture, it came down to 12, which is proof positive that cardiac action had become less embarrassed. These punctures then act in a two-fold manner in relieving the patient of toxemia and in improving cardiac action.

It is right, then, to conclude that with old chronic cases of nephritis uræmigenous and dropsical to the phase of asystole, introducing into the circulation of toxic liquids which are held in the tissues should be guarded against lest grave accidents, often mortal accidents, are called into action.

That one should be extremely careful in the employment of the classical method of treating the conditions in these cases.

That, on the contrary, the mechanical evacuation of these liquids

prevents toxic accidents and relieves at this stage of the disease the action of the heart by removing the peripheral resistance in the circulation so that the necessity for the exhibition of medicine is removed.

SYNOPSIS OF THE ADDRESS DELIVERED BY DR. HANS KARFUNKEL, OF BERLIN, AT THE GERMAN MEDICAL SOCIETY NEW YORK, N. Y.

Dr. Karfunkel, of Berlin, Germany, read a paper on about 600 cases of all forms of tuberculosis, which he treated with living virulent bacilli of a heretofore unknown species. The bacilli grow on glycerine agar and glycerine bouillons.

The organisms form spores in 2 to 3 days. In latter cultures only spores are found.

The bacilli are not acid fast, and have no relation whatever to the tubercle bacillus.

Injection of the bacilli in animals produce only temperature reactions. For the injections, he uses a solution of the bacilli in normal salt solution. He injects about 0.02—3.0 cc. intramuscularly in the gluteal region. The succeeding injections consist of the bacilli together with a filtrate of the glycerine bouillon culture.

In some cases he injected also tuberculine.

He has developed a definite method of the treatment of cases from the reaction, the favorable and unfavorable effects obtained by him in many thousand injections.

The method consists of giving several combinations of the bacilli with its filtrate.

These combinations he has arranged in the form of a table.

The dosage depends on the severity of the lesion. The more extensive the lesion, the smaller the dose.

The intervals between injections depends upon the effect obtained by the preceeding injection and also by the reaction itself.

The cases which he treated were of two kinds; (a) pulmonary tuberculosis; (b) surgical tuberculosis.

The cases of pulmonary tuberculosis he classifies in three groups: mild, moderately severe and severe cases.

In the mild cases he is able to cure 100 per cent of the cases.

Of the moderately severe cases he gets complete improvement in 40 per cent of the cases, and a marked effect in 60 per cent of the cases.

In severe cases a complete improvement in 30 per cent.

The length of treatment is usually about 38 days to 10 months.

In the majority of the cases, the results were permanent during the time they were observed.

Surgical cases, such as tuberculous sinuses, tuberculous epididymitis, tuberculous dactylitis, healed after two or three injections of the bacilli alone, very marked effects were obtained by subcutaneous injections in lupus and other forms of tuberculosis of the skin.

There are two kinds of reactions which follow the injections: Focal reactions, consisting of changes in the lesions, and general reactions, consisting of headache, temperature and malaise.

In no cases were there any abscesses or infiltrations.

These subjective symptoms are the first to disappear.

Hemophthysis disappears promptly after the injections.

The objective symptoms soon disappear after repeated injections.

In many cases, however, one injection is sufficient.

From seriological investigations, complement fixation tests and blood examinations he assumes the probable mode of action to be due to the formation of a fat splitting ferment by the bacilli and by the lymphocytes, which they greatly increase. This fat splitting ferment destroys the fatty capsule of the tubercle bacilli and allows it to be destroyed by the antibodies of the blood and helps to immunize the body against the tubercle bacillus and lessen the tuberculin sensibility. The filtrate is given with the succeeding injections of the bacilli, to combine with the antibodies against the bacilli, which were formed by the first injection.

A copy of the original article can be had from the author and the remedy is now being tested by a number of prominent physicians. It will be given to the profession as soon as the author's results have been corroborated.

Proceedings of Societies

TRANSACTIONS OF THE CLINICAL SOCIETY OF THE NEW YORK POST-GRADUATE MEDICAL SCHOOL AND HOSPITAL.

(Stated Meeting, October 17, 1913, the President, R. H. Halsey, M.D., in the Chair.)

"The Treatment of Tubercular Joints with Thiocol-Glycerine: A New Method."*—By Jacob Heckmann, M.D., Instructor in Surgery in the New York Post-Graduate Medical School and Hospital.

Besides the constitutional treatment, which must be considered in all forms of tuberculosis, there are three main different types of local treatment of tubercular joints in vogue. Each method has its strong advocates and is more or less preferred by the physician in charge according to his special training and inclination.

The conservative orthopedist is inclined to use immobilization, fixation and extension only. The conservative surgeon adds to this regime early aspiration and the different injection methods; the more radical general or orthopedic surgeon prefers a more or less radical excision early or later in the course of the disease.

Formerly, when we believed that by a radical operation upon a tubercular area would save our patient from a general infection, this latter method seemed partially justifiable. But now we know that the mortality with the radical excision of the tubercular hip-joint, for instance, varies, even in the hands of good surgeons between 15 and 50 per cent; we know 10 per cent alone die from miliary tuberculosis as a direct result of the operation; we know a large percentage of those that recover will have a shortening of

*Read before the Clinical Society of the New York Post-Graduate Medical School and Hospital, October 17, 1913.

the leg up to three or four inches, increasing in later life, sometimes up to six inches.

We know that while tubercular arthritis *per se* is very little apt to lead to bony ankylosis, the radical method of excision results in a large percentage of cases in pure ankylosis or in a loose fibrous union with a worse functional result.

In view of these facts—and they are facts—we can without hesitation state, that the radical excision for tubercular joint-disease is certainly not an ideal method of treatment and ought to be performed only as a last resort. With our present knowledge of the subject, the X-rays as a means to early diagnosis, the education of the public, a joint tuberculosis should not be permitted to reach the state requiring a radical excision.

The conservative or pure orthopedic treatment tends to remove all untoward influences from the sick joint, such as motion and friction, by means of immobilization, fixation, extension with plaster of Paris cast and various ingenious apparatus. This is the main and most important way of treatment, as it is an essential part of the two other methods. There is no doubt that fixation and immobilization properly applied and adherred to will in due time cure far the larger majority of tubecular arthritis.

The treatment as herein outlined has been more of a passive variety, but with the injection-method, we bring in an active element, that actually attacks the tubercular process within the joint or joint-abscess. While all the chemicals used so far can not claim to have a specific action on this process, they cause a subacute local inflammation, which, when often repeated finally tends to cure the tubercular area. At the same time the injected material helps to prevent ankylosis of the joint. It goes without saying that the entire orthopedic regime has to be kept up with these injections; the plaster of Paris cast giving the additional advantage, that its even pressure around the joint accelerates the absorption of the injected material and of the effusion caused by it.

After sixteen years of experience it is my firm conviction that the injection-method combined with the orthopedic shortens considerably the course of treatment and ultimately gives better function of the affected joint.

I want to state here, that none of the fluid-injection-methods ought to be used, wherever there is a fistulous or sinus-communication with the outside. It was just the selection of just such cases, that brought the method in discredit. Of the different chemical combinations used I can omit all as more or less obsolete except two: the iodoform-glycerine and the formalin-glycerin injection.

I have used the iodoform-glycerine injection for about ten years quite frequently and I can state that the method while seemingly forgotten and disliked by a majority, still gives, patiently and properly employed, satisfactory results. There are, however, a few objections to the iodoform. Some patients have an idiosyncrasy toward the iodoform and are liable to suffer from iodoform-eczema or severer symptoms of poisoning; then the iodoform-glycerine-injection brings an insoluble substance onto a sensitive joint, which for mechanical reasons causes considerably more pain than a soluble one. In addition, the disagreeable smell, objectionable to the patient as much as to the physician, helped to cast it into disreptute.

With the formalin-glycerine injection brought out by Murphy of Chicago, I have not had the experience to form a decided opinion, but the name of the inventor guarantees its value, and the reports, especially from France, where the method is widely used, and particularly in the seaside hospitals for surgical tuberculosis, verify the claims of the originator.

Years ago wood-tar creosote was considered a specific for tuberculosis, and though we know this fact to be incorrect, we can not deny that this drug and its derivatives have a beneficient action on tuberculosis. It was this knowledge that made me select thiocol for the injection treatment of tubercular joints, abscesses and tubercular cavities. Thiocol, known chemically as potassium-guaiacol-sulphonate, is a direct derivative from guaiacol and an indirect one from creosote. A colorless and odorless powder, it is this solubility that makes it suitable for our purpose. It is less soluble in glycerine and for that reason it is necessary to add a little more than an even amount of water to get a clear solution with the glycerin. For instance, to make up a 10 per cent solu-

tion, take thiocol grs. xlv, water, oz. 1, and glycerin, drachms 1, and heat it up until the solution is clear. For every injection this solution is heated up again for sterilization and as a part of the water evaporate, a small quantity must be added from time to time. Recently I found that guaicol is readily soluble in glycerin without water and I shall in the future try to use guiacol instead.

"Case of Tubercular Hip Treated by Thiocol-Glycerin Injections."*—By Jacob Heckmann, M.D., Instructor in Surgery in the New York Post-Graduate Medical School Hospital.

Dr. Heckmann presented a case of tubercular arthritis of the left hip in a boy of 4 years old, who came under treatment on November 11, 1912, with a typical history of hip-disease. The preliminary complaints dated back four months, the more acute symptoms had started about six weeks previously; there had been a painless interval of about five weeks.

On examination the muscular atrophy was well developed, muscular spasm pronounced; extension and flexion much restricted, abduction almost absent; at the intergluteal fold an abscess was to be felt about the size of a goose-egg. The X-rays showed the epiphysis of the head of the femur entirely rarified, the joint distended and part of the acetabulum irregular in outline.

The abscess was aspirated and one drachm of thiocol-glycerine 8 per cent injected into the cavity every 10 to 14 days for four times. Immobilization by a short plaster of Paris spica. There was no more aspiration possible before the fourth injection and two weeks later the abscess had entirely disappeared. Five more injections of the same solution were made into the distended joint at intervals of about two weeks; after the fourth treatment he was allowed to walk in his short spica. On March 7, 1913, four months after the beginning of the treatment, four weeks after the last injection, he was sent for an X-ray picture, the plaster of Paris case being removed. Since then he was lost sight of until a few days ago. During all this time he had walked at leisure without limp.

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*Presented before the Clinical Society of the New York Post-Graduate Medical School and Hospital, October 17, 1913.

His general condition was good, the muscular atrophy had gone, flexion and extension in the hip were normal, the abduction slightly restricted. The fact that the patient was able to walk those seven months without limp or pain and without returning of any of the former symptoms, proves the efficiency of the method for this case.

"Indurated ulcer of the Stomach: Resection of Pylorous."*—By E. W. Peterson, M.D., Adjunct Professor of Surgery in the New York Post-Graduate Medical School and Hospital.

History—The patient was an Englishman, 36 years of age. Family history, negative. Previous history, unimportant. He had always lived in good hygienic surroundings. He was temperate in the use of alcohol; smoked excessively until five years ago; now smokes moderately. Always slept well. Inclined to be constipated and took cathartics. Appetite fair until two years ago. On account of frequent travels his diet had to be varied and his meals were taken at irregular hours. Nine years ago he went to South America and at that time he was accustomed to take a light breakfast at 7:30; then took a long ride and had a later breakfast at 11:30—a heavy meal. Sometimes hunger lasted so long as to make final taking of food distressing. Seven o'clock dinner, eaten rapidly and ravenously. Five years ago he was in Hawaii. The diet there was the same as before. Three years ago he was in Cuba, where the cooking and service was poor and irregular. Sometimes the food was so poor that the patient refused to take it and made his meal on cheese and bread.

Present illness began about five years ago, when he noticed a tendency to choke back eructations of a tasteless, colorless liquid in considerable quantity. Two years later had vomiting associated with these symptoms. He had twelve attacks in four or five months. Two years ago these attacks came on about nine to eleven in the morning, accompanied with pain. At times the vomitus was the color of coffee or cocoa; never acid or sour; no

*Abstract of remarks delivered before the Clinical Society of the New York Post-Graduate Medical School and Hospital, October 17, 1913.

numbness. Relief was afforded by taking food. The patient could also get relief by taking soda bicarbonate. He came to the Post-Graduate Hospital and the diagnosis of probable pyloric obstruction was made. The stomach contents showed an excess of hydrochloric acid, but no lactic acid. A radiographic examination was made and the result showed a stomach of the orthotonic type, large in size, outline defective and pylorus placed up and to the left; residue after six hours; no hypermotility; duodenum well filled. Diagnosis: callous ulcer of the pylorus with atony and dilatation of stomach.

The patient was operated upon, a median laparotomy being done. Palpation revealed a large pyloric growth, the size of an egg, with extensive induration of the pyloric end of the stomach, extending into the duodenum; also glands around the lesser and greater curvatures of the stomach, and enlargement of the mesenteric glands in the neighborhood of the jejunum. It was thought to be a case of malignancy and the indurated portion was resected, which included part of the stomach and duodenum. A posterior gastro-enterostomy was then made. The specimen was sent to the laboratory for examination. The pathologic report was as follows:

"Speciment consists of pyloric portion of stomach measuring approximately 10 cm. in length. On opening, a large irregular rather deep ulcer is seen with indurated edges, and presenting a firm, generally smooth base. The ulcer is situated on the lesser curvature some distance proximal to the pylorus. Stomach wall surrounding the ulcer is firm and the omental fat along the lesser curvature is dense and adherent. Microscopic examination from the most indurated portion of the lesion shows a chronic ulcer with destruction of the mucosa and submucosa resulting in the exposure of a necrotic sloughing base, immediately below which the muscle tissue can be seen, showing evidence of fibrosis and chronic inflammatory change. Round-celled infiltration is abundant throughout this part of the specimen. Mucous membrane surrounding the ulcer is congested. In several sections examined no evidence of malignancy can be detected."

The patient had no further vomiting and little abdominal dis-

tress after the operation. He was started in on a liquid diet 24 hours after the operation, and in a few days he was taking fluid and semi-solid diet. His digestion now is perfect and he feels better than for many years.

The interesting points in the case were: (1) The five years of digestive disorder with discomfort and vomiting. (2) The radiographic study of the case, upon which the diagnosis of callous ulcer was made before operation. (3) The finding of a pyloric tumor with enlarged glands in the omentum and mesentery which stimulated malignancy. (4) The reaction of the indurated portion of stomach and duodenum, with posterior gastro-enterostomy. (5) The microscopic examination, which showed only an inflammatory benign condition. (6) The gratifying recovery of the patient.

"Transfixation Treatment of the Shaft of the Femur"; "Dislocation of the Elbow, with Compound Fracture of the Forearm."*—By John J. Moorhead, M.D., Adjunct Professor of Surgery in the New York Post-Graduate Medical School and Hospital.

Dr. Moorhead said that he would like to add another case to those given on the program, viz., a case of fracture of the neck of the femur. The patient was a woman sixty-three years old and last February she had a fracture due to a fall of six feet. The X-ray plates showed a diatrochanteric fracture of the femur. He wished to show this patient for it illustrated what can sometimes happen in these unfavorable cases. The method of treatment employed was brought to the attention of the profession chiefly by Dr. Whitman. It consisted in breaking up any adhesions by flexing the thigh on the abdomen, then rotating the thigh and then using direct traction followed by abduction as far as the opposite limb can be abducted. A plaster of Paris spica is then applied. The patient had a shortening of about an inch and some little limp, but had perfectly free use of the hip-joint.

*Abstract of remarks delivered before the Clinical Society of the New York Post-Graduate Medical School and Hospital, October 17, 1913.

The other cases consisted of a series of seven fractures of the shaft of the femur in children, the treatment of these beginning last July. His attention was recently called to this extension method, first advocated by Codavilla in 1903. He transfixed the os calcis with a metal pin, and then put on weights and overcame the contraction of the muscles by pulling on this pin. Steinman modified this by transfixing the lower broken fragment. In Dr. Moorhead's cases a steel drill was inserted two and a half inches above the condyle and passed from without in through the centre of the shaft of the femur to the inner side opposite to the place of entrance.

Technic—The patient is anesthetized and a half inch incision made, and the drill passed through the bone and through the soft parts until it impinges on the skin directly opposite where it entered. It is then pushed through the skin, and at either end of the drill a cord is fastened, which meets a spreader; this is fastened to a single cord and then to a pulley and weight. The patient is put back to bed on an inclined plane, made by a pillow or other device, and a weight of about eight pounds is put on the drill. This is increased every other day until it reaches fifteen pounds in ten days or two weeks. After that the weight is allowed to remain stationary. It is kept in that position without removing the drill for three or four weeks, after which the drill is taken out. It is quite loose then and comes out without much hemorrhage, that being due to granulation of the soft parts.

This method had been used in some nine cases altogether. In one particular case Dr. Moorhead directed attention to its value in a fracture of the femur in a child. A cake of ice fell on the child causing the fracture. A picture showed the lateral view at the end of ten days' extension-treatment with this drill method. Other views showed fractures in various locations, some having the drill introduced, others not.

Two diagrams were shown illustrating the anatomical location for the passing of the drill. The method is an in-between method —between Buck's extension treatment and other non-operative methods, and the operative methods of the Lane plating type. It has certain disadvantages, like other operative methods, but in

the first place it is not a very serious operation, from the standpoint of the patient and not a difficult one from the standpoint of the surgeon. Dr. Moorhead said that he regarded the operation of plating a fractured femur, as a major operation and thought there were relatively few surgeons who could do a first-class operation on a fractured femur with much overlapping. Another point worthy of mention is the fact that operation is not performed in traumatized territory. In the next place, no foreign body is left in the tissues and it is an operation which can be done in ten minutes—it does not take much paraphernalia. An ordinary Yankee brace and a steel drill is all that is needed, and the work can be done at home. It has these disadvantages: It does not give very great control over lateral displacement, but if the shortening can be overcome and the limb kept straight, a good result will be obtained. It does offer the possibility of introducing infection, but if the operative technique is as it should be there is not much opportunity for infection as by the other operative methods. Another point urged against the method is that it leaves the patient open to an osteoporosis, but that is a theoretical and not a practical difficulty and it does not occur in these series.

The third fracture which Dr. Moorhead reported was a case that came to the Post-Graduate Hospital some three weeks ago —a boy, aged 12, who fell in the gymnasium, and sustained a backward dislocation of the elbow and a compound fracture of both bones of the same forearm. The dislocation was reduced under an anesthetic and an attempt was made to replace the bones without very satisfactory results, by the use of adhesive plaster and a modified Buck's extension. At the end of the week no reduction occurred as was shown in an X-ray photograph. On the eighth day the radius was plated with an ordinary two-screw plate; another small incision was made over the ulna and it was sprung into place and the result was excellent.

"The Surgical and Medical Treatment of Thoracic Aneurism."*—By William C. Lusk, M.D., New York.

Dr. Lusk said that he had found that the surgical treatment of thoracic aneurism must be supplemented by the treatment of the underlying constitutional disease with mercury and salvarsan. After the wiring operation any benefit was sooner or later—from about one to six months—followed by a return of the symptoms unless the treatment of the syphilis was rigidly followed up. Four of the patients shown had been wired in the year 1912, on March 11, May 3, October 1 and December 31, respectively, and all had had recurring symptoms which in the first three cases has been dispelled or very greatly benefited by the use of mercury and salvarsan. One of these patients had been relieved of attacks of strangulation caused by the compression of the trachea, probably by a peri-aneurismal edema, following the use of these drugs. In the fourth wired case neosalvarsan and salvarsan had been given at intervals for some months but with only a few doses of mercury at the same time, to the detriment of the patient, but latterly with stopping the salvarsan and giving an active course in mercury salycilate intramuscularly, improvement had finally come. [Patient died October 31 of rupture of the aneurism.] A fifth patient with a median line aneurism of the aortic arch, not wired, had likewise with repeated doses of neosalvarsan and salvarsan at intervals and very little mercury, done badly, but recently with stopping the salvarsan and giving mercury he had done better. [Died November 19 with aggravation of all his symptoms following exertion.] Dr. Alexander Lambert had given relief to a patient with a similarly situated aneurism by the use of neosalvarsan, but the latter was supplemented with mercury, and the patient regain much activity. Dr. George R. Satterlee has reported "A Case of Thoracic Tumor and Aneurism of the Descending Thoracic Aorta, Treated with Salvarsan." (*New York Medical Journal,* January 13, 1912). He supplemented two small doses

*Abstract of remarks delivered before the Clinical Society of the New York Post-Graduate Medical School and Hospital, October 17, 1913 (by invitation).

of salvarsan with an active course of mercury. The salvarsan should be given in small doses, never more than 0.3 fram. It was probably best that comparatively little salvarsan should be given, but a great deal of mercury. Dr. John A. Fordyce and Dr. E. L. Keyes, Jr., had been consulted about the treatment of the syphilis. Both of them, as well as Dr. Alexander Lambert, had made a point of giving small doses of salvarsan to these cases.

One cardinal principle which Dr. Lusk had laid down in his technic of the Moore-Corradi operation, and he said he believed it was a correct one, was to get as much of the wire as possible into contact with the lining of the aneurismal cavity, which sites of contact would become sites of trauma on the passage of the electrical current. He used a No. 29 wire of gold-platinum-silver-copper alloy, which was resilient. He had found at autopsy on one case in which the introduced wire had, prior to operation, been coiled in loops shaped in an even one-way curve, that at any place where a segment of the wire had been laid down against the intima, all loops of wire laid down subsequently that crossed such segment, were prevented by the latter from coming into contact with the neighboring intima. Consequently after this experience, in order to try and increase the area of contact of the wire with the intima, a portion of the wire had been shaped in undulating curves with the intention that the peripheral convexities of the same would, more or less often, dip down to the intima in the space between the wires already laid down. In using undulated wire care should be taken that that portion of the wire which finally passes into the needle and is left in the needle track at the end of the operation, is straight in shape, since, if undulating, on withdrawal of the needle the curves of the resilient wire would tend to reform in the straight needle track and would cause pressure necrosis. This happened in one case with fatal result.

Photographs were shown of the results of the wiring operation in the aortas of two dogs 10 and 15 days respectively post-operative. The wires in these cases had been undulated so that the crests of the curves alternately touched opposite sides of the aorta. At the sites of contact of the wires, which had been traumatized by the electrical current, the fibrin originally deposited by the

electrolysis was seen to be firmly adherent, binding the wire to the arterial wall and evidently undergoing organization. This lesion produced in the swiftly moving blood stream of a dog's aorta was comparable with what it would be possible to accomplish in an evenly dilated segment of the aortic arch along whose walls the blood must everywhere course with unvarying swiftness.

In the animal experimentation, if the wire were introduced grease-free into the aorta, the conditions seemed to be most favorable for the deposit of the best kind of fibrin, very firm in quality and considerable in amount, consequent upon passing the electric current.

Selected Articles

THE MEDICAL MALPRACTICE SUIT.

By Theodore William Schaefer, M.D., Kansas City, Mo.

The life pursuit of a physician and surgeon is based upon the highest principle of humanitarianism. The true physician's end and aim is the prevention, cure and alleviation of disease. In fulfilling these utilitarian and altruistic requirements he promotes the welfare of mankind. In striving to attain these ideals he performs the functions of a humanitarian and a philanthropist. Much is required of him. He is expected to be a doctor of the mind as well as of the body.

It has always remained an unsolvable paradox to persons of culture and refinement as to why a profession that devotes so much of its time in rendering charitable services to humanity is rewarded with so much ingratitude. Indeed, it is a fact that the physician receives little of this world's goods. Should a doctor have the misfortune to get into legal trouble, ten to one, the fickle and ungrateful public will be arrayed against him. Even his supposed best friends leave him when he needs them most. He is at the mercy and whims of a judge and the prejudice of a jury. A lawyer, in similar plight, stands a far better chance. As you know, he has taken "the immunity bath!" Just look at the attention which newspapers show even the lowest criminal!

The study of the history of medicine and the medical profession unquestionably offers to the layman, from certain points of view, many features of interest. In the first place, it is of interest to know the underlying causes, viewed from the historic as well as the psychological standpoints, that have been ignorantly fostered for ages in perpetuating the grossest prejudices which have always been inimical to physicians. Benefactors have always been treated with ingratitude. This is a deep seated defect in human nature that can not be eradicated.

In studying the origin of this prejudice toward physicians it will be found that most of the nations of antiquity were inimical toward physicians. Satirical remarks about physicians occur even in the Bible. The Roman writers, Cato and Pliny, were antagonistic toward physicians, writing in the sharpest and curtest satire. According to the well-known testimony of Pliny the Romans had originally no physicians, at least none whom we can consider educated. There was among the Romans a semi-original, mythological medicine and traces of theurgic practice. Greek physicians practiced in Rome. The Romans borrowed from the Greeks. Malpractice was not liable to punishment among the Greeks. The ancient Greeks were a superior race intellectually.

There were many proverbial sayings current among the Jews referring to physicians. The reference to physicians in Mark, 5, 26, is not very appreciative (cf. with Luke, 8, 43). Doubtless many of them were, like Job's friends (Job, 13:4), that is, having the same relation to real physicians as that which an insignificant bears to the true God. Men of this kind probably gave rise to the proverb in Kiddushin, 4:14, that "the best physicians was deserving of hell. Another unfavorable reference to physicians occurs in Mark 5:6: "And had suffered many things of many physicians, and spent all she had, and was nothing bettered, but rather grew worse" (cf. with Luke 8:43). Scripture makes no mention of physicians before Joseph. The art of medicine, however, was very ancient in Egypt. The medical knowledge of the biblical peoples was small in amount and crude in character. During biblical times the physician was a priest as well as a healer. In early Egypt the physicians were priests. The Jewish physicians and surgeons possessed a certain amount of traditional and empirical knowledge. In post-biblical times Jewish physicians were famous throughout the East, and the saying of many of these are preserved in the Talmud and other rabinical writings.

The Jews adopted many things from the Assyrians and Babylonians. The ideas of the Sabbath and those of the devil date from the Babylonian captivity of the Jews. Among the Babylonians the physicians were well compensated when the surgical operation was a success; but matters changed when the patient

died, and as a reward for his services the doctor's hand was cut off. After all we have something for which to be thankful. Physicians who are prone to complain about fees being small, and patients failing to pay them, should remember that though some recorded fees in olden times were large, the status of the recipient was hardly as enviable as that of the modern doctor. Dr. Walsh, of New York, has commented recently on a provision of King Hammurabi, of Babylon, B. C. 2250, that "if a physician operated on a man and save a man's life, he shall receive ten sheckels of silver; but if he cause the man's death, they shall cut off his fingers." Perhaps, however, the modern malpractice suit, which has taken the place of the latter penalty, is even more to be dreaded than personal mutilation.

During the time of Cyrus, who was king of Persia (everything has its earlier example), the physicians were occasionally crucified if their treatment was not fortunate in its results. In a similar danger were the ordinary physicians of the Califs and the mediæval kings. European physicians sojourning temporarily in Persia have not been able to improve it much. Dr. J. E. Polak, ordinary physician to the Shah in 1877, before chloroforming a patient for operation, was always compelled to see that his horse was ready saddled, so that in case his patient died under chloroform he might be able to leave the kingdom at once.

Superstition, lack of education, barbarity, etc., make practice even dangerous for inland physicians in Asia Minor and Egypt. A physician by the name of Sayda, who was educated in Egypt, and an apothecary, who also practiced medicine, when the cholera in 1875 swept off their patients, were stoned in biblical style! A remnant of this antagonistic hereditary trait against physicians exists still among nations speaking the Romance languages. During times of great epidemics the Italians, for instance, are likely, in a mad frenzy, to persecute physicians and demolish hospitals.

It is a traditional, favorite belief in popular metaphysics that man, who is considered a very noble object of creation, is divine and the image of God. Of course, man feels himself immensely flattered by this pet belief, but his very actions in life disprove it in the most emphatic manner. The pre-historic excavations of

Europe prove in a most conclusive manner that primitive or aboriginal man was a cannibal. Besides, think of the thousands of murders that are committed and the many terrible crimes and acts of wickedness that are perpetrated by this supposed divine creature. Ten thousand homicidal crimes are committed in the United States each year. This country leads in murders. Think of the thousands whom the law does not touch who choose and pursue criminal careers. In making an anthropo-psychological study of the classes of society that form our body social we find that it is not at all uniform, but a very heterogeneous mass or so-called panmixia. Savage traits are ever dominant in our social body, notwithstanding the higher moral influences of human culture. It is well to bear in mind that man progressed not only in spite of, but because of, what we now consider vices and animal passions. Intense selfishness, brutality and utter disregard for the injury resulting to his fellows, were cardinal virtues in the savage. A low cunning, which we now consider ignoble, prevailed, and morality slowly gained ground. Slowly there arose those noble humanitarian sentiments of love and sympathy which now sway the best of mankind. Yet, strange as it may seem, forbearance and non-resistance are responsible for our present social and political unrest, because the unscrupulousness, immorality and brutality, hereditary and proper to the prehistoric cave man, are equally transmitted to his descendants of today. In the dim vista of the remote past, intense selfishness and the ability to plunder or defend, were the salvation of the family; to be timid or considerate of others, meant extinction. It was scorned and unappreciated then, as it is today, by individuals with a preponderating primitive atavism which has outlived its usefulness in promoting human progress. Those who have had the opportunity of coming in contact with primitive peoples and who have moved among the so-called highly civilized in America, Europe, Africa, Australia, Malay, India and the South Seas, have had frequent occasion to study the many cruel and low traits of pronounced barbarism that are incarnated in man. It is a fact that such people in a low state of mental development, comprising as they do a part of civilized society, do not, in our experience, appreciate

consideration, but mistake it for fear. In their heart of hearts they despise and lose respect for those who treat them with kindness and even such as have had the advantage of some education and training from the ministers of the Gospel, are only modified on the surface, and relapse when circumstances make them forget the restraint imposed on them (*La Tribunal Medicale*, June, 1912). These hereditary, traditional, barbaric traits of a lowly human nature, characterized by a total lack of consideration, or humanitarian sentiments of kindness, and with resentment toward their benefactors, with a total lack of gratitude, are simply due to an abnormal anatomical (i.e., psychical) relapse to ancestral defects, which, according to Mendel's law, occasionally crop out and are only restrained by a thin veneer of social polish enforced by contact with the truly civilized or cultured. The creature, therefore, who attempts to plunder a doctor by means of a malpractice suit, that is based upon the ancient spoils system, is simply a barbarian or robbeer and the lawyer who aids and abets him, is simply a *particeps criminis* in this nefarious deal, sanctioned by a mediæval judiciary. We have had enough of this predatory parasitism! These "speculative lawsuits" have been too common in our day and it is to be hoped that a more enlightened public conscience will put an end to them.

The quality of being humane is the characteristic attribute of the nobility of the physician's spiritual make-up; it guides him throughout life; it fosters and embelishes his kind feelings, dispositions and sympathies; it establishes a disposition to relieve persons or animals in distress, and to treat all creatures with kindness and tenderness. All honor to the medical profession, which numbers within its rank numerous heroes and martyrs whose deaths, heroic and glorious, in the valient combat with disease, meet with scant praise and slight recognition by the ungrateful multitude!

The physician's greatest foe is the dense ignorance of the masses! From time immemorial the aim of physicians has been the moral, intellectual and physical up-lift of mankind. Among physicians there were many of the world's greatest reformers and benefactors. There is a prevalent popular misconception of the

supposed fabulous income of doctors. Of course, this is a myth! This erroneous belief is responsible for the piratical raids of certain irresponsible, unscrupulous, voracious creatures, whose desires are to enrich themselves by extorting a form of ransom from unsuspecting doctors. Blackmail, malpractice suits, trumped-up charges and other low predatory methods are employed to get hold of the big imaginary money bag of the doctor. Certain vampires, criminal and forensic, are the parasites that prey upon doctors. Various "doctors' defense companies" have sprung up like mushrooms to keep the easily intimidated doctors in constant fear. The ignorant masses imagine that he is surely an "easy mark." Conversely: Who has ever thought of a "Lawyers' Defense Company?" Such a concern would be an anomaly. There are no parasites preying on the legal profession. The medical profession should put an end to these abominations. There are as many superior men in the medical as there are in the legal profession. If there are black sheep in the medical profession, they are also to be found in the legal profession. Human nature is certainly the same the wide world over! To a man of a scholastic education it has always appeared a paradox as to why one profession (the legal) should assume to be endowed with a superior hegemoney, a kind of a tutelage, assuming to exercise a dominating custodianship for physicians, when the latter are morally and intellectually the equal of lawyers and are capable of taking care of themselves. We are no longer taking lessons in a forensic Kinder-Garten. (The writer is not prejudiced toward lawyers as individuals, as some of his best friends are lawyers! He is simply referring to conditions from a generalized standpoint!) Not all doctors are ignorant and morally decdepit.

A narrow-minded attitude of sophistry has cultivated an inquiry against physicians that demands an end to these chicaneries and abominations. What is food for the goose is also food for the gander. Lawyers should be held amenable for their acts just as well as other people. The trouble in this country is that they, as a class, have a complete and exclusive monopoly of the machinery of the courts. We have now a privileged class favoritism in this country. The legal profession exercises a *privileged syndic-*

ocracy—a *rule or domination of lawyers* in this country, which is too much in favor of the legal profession! The following psychological axiom is taken for granted: The most helpful attitude of mind is not usually that of the attorney for the prosecution or that for the defense. The judicial mind is highly controversial. The scientific mind is the better qualified one, as it is not based wholly upon one-sided argument, but that of *impartial exposition*. Let the lawyer look introspectively into his own human nature and let him search for the unknown quantity called perfection. He is *not* likely to find it! The benighted heathens in so-called civilized society who are always seeking the mysterious, the impossible perfection, in physicians, do not know that medicine is but a practical art, pure and simple, *not* an absolute science! In medicine we are constantly dealing with relativities and ever varying factors. Indeed, nothing in this wide world, materially and psychically, is absolute, and the thought of perfection is an ideal that can never be attained. The physician is the best judge of his own affairs and not the lawyer.

In all legal matters pertaining to medicine there should be an appointed commission of representative and able physicians who possess also a forensic and a scientific training. They also have a better opportunity to judge medical ability and medical activity.

Notwithstanding its highly humanitarian nature, the practice of medicine as a life pursuit is considered one of the most unremunerative and ungrateful of callings. The physician is inadequately paid for his services. There are many mechanics who earn more money than some doctors do and are certain of their pay, while the doctors are at the mercy of the "dead-beats."—Just on the border-line of malpractice tactics, a highly nefarious practice (a species of extortion) is perpetrated by certain unscrupulous individuals upon physicians whereby a return of money is demanded for professional services rendered. We as physicians are continually confronted by antagonistic and prejudicial influences that are ever present in the social body.

It is a fact that the general influence of the public upon the medical men as a class is degrading rather than ennobling or activating to great endeavor. To the metaphysician these psycho-

logical phenomena of man are indeed very plain. To the metaphysician it is apparent that there is something wrong in the very nature of man's entire psychological make-up. In fact, this is to be expected, for even from an anatomical standpoint, man is an imperfect being. To begin with, there is a cruel, deep-rooted *méchanceté fonciére*) streak which permeates human nature that makes every metaphysician ponder with an uneasy feeling respecting man's constantly reappearing atavistic traits that lie hidden in his nature. The traditional prejudices that permeate our social body and that have been inimical to physicians, have been ignorantly and misanthropically fostered as an heritage for ages. Human nature is and has been the same throughout ages. Man is not wholly a rational being, as his controlling opinions and religions do not rest on rational considerations alone, however plausible these may appear to the crass multitude. Man, the more we study him psychologically with a critical caution, becomes an ever profound enigma. However, to the philosopher and psychologist there is one positive working formula in life: to exercise caution in the confidence of people and in the supposed superiority of knowledge *de homine!* Many of the psychological phenomena just depicted are easily explained on the supposition that the aims and desires of the so-called public conscience is of a more lowly nature, being much more primitive and simple than those of the individual; a large number of persons agree that in general the common level of the lowest must be adequate to them.

In primitive man the legitimacy of a transaction, as that of an earning, acquired in the pursuit of an undertaking is not accepted where the surrender of a compensation does not become manifest. Gratuitous gain and possession acquired by theft are indistinguishable from the viewpoint of primitive consciousness of right, consequently no dominations in the form of gifts exist among low grades of culture. One perceives here the low status of the public conscience even in civilized society with respect to the appreciation and valuation of professional and gratuitous services. There should be a *limit* and *a careful discrimination* in humanitarianism! Intangible values are incomprehensible to the ordinary or primitive mind. The crass multitude recognizes and appre-

.iates only material values; it, therefore, ignores intellectual values!

In studying the *motif* of many of the malpractice suits, besides the object of mercenary gain, the vindictive or primitive element of human nature plays a considerable role. There is a growing tendency on the part of the lower and pauperized class of patients to sue their physician or surgeon if anything goes wrong. In this they are most willingly abetted by a number of lawyers of a very shady type who invariably uphold the claim even when it is obviously absurd. It is not pleasant for physicians or surgeons to find their names in the daily papers , which are on the look-out for every sensation of this kind. If the present tendency of suing physicians or surgeons for every imaginary trumped-up charge is not checked, it is to be feared that medical men will seek more and more to avoid responsibilities in difficult and serious cases where active interference is not peremptorily called for. We are now living in an era in which physicians are antagonized and persecuted, the judiciary being a willing tool in this as well as in any other dubious forensic transaction. Barely a hundred years ago it persecuted the sorcerers and hung the witches.

We are far behind Europe in medicine, the collateral sciences and jurisprudence. In Germany, France and England all the branches of science—anthropology, medicine, physics, chemistry, psychology, socially, economics, etc., have been assisting the way to progress in the scientific administration of law. It is indeed a fact that our country has started rather late in educational matters. The fundamental, academic education of the physician and lawyer has hitherto been sadly neglected. In this country the student of medicine and the student of law have each evolved from the same raw material. They are largely, if the truth be told, the products of our common public schools and *not* of our colleges. In drawing a distinct line of demarcation in malpractice suits only those should be accepted by the courts that are based upon intentional negligence, carelessness, dense ignorance, gross rashness and inattention on the part of the physician. Cases of malice, criminal intent, direct manslaughter, would hardly be included under the designation of malpractice. By a

very peculiar construction of the law the woman in cases of induced abortion is not "technically" an accomplice in the offence, neither is the man who is responsible for her condition and who also aided her in being relieved from it. The whole onus is adroitly shoved on the doctor who is the real victim and scapegoat. Many cases (not criminal) of so-called malpractice (based upon the spoils system) that now fill the docket of the courts could be thus eliminated.—*Medical Review of Reviews.*

Extracts from Home and Foreign Journals.

SURGICAL

Gallstones: A Plea for Earlier Operation.

Power (*British Journal of Surgery*) says that in 72 cases the patients suffered from cholelithiasis; in the remaining 17 there were inflammations of the gall bladder, due to various causes, but no gallstones. Fifty-eight were females, 32 males. The ages varied from 5 years to 82 years. The symptoms had lasted from a few days to twenty years or more. Fifty-seven patients were jaundiced at some period of the illness. The gall bladder was palpable through the abdominal wall in 28 cases. Except in the fattest people there was a localized tension of the abdominal wall in the right hypochrondrium, even when there was no localized tenderness. Many of the patients had been treated for very long periods, some knowingly for gallstones, others for "indigestion," a few for ague or some other form of intermittent fever. All had suffered from attacks of biliary colic, some, however, only slightly, others so frequently and severely that they were at last driven to surgery for relief, whilst others had suffered from a single attack of such severity that immediate operation was required.

The operation performed in most cases was opening and draining the gall bladder, and allowing it to heal by granulation. In only a few cases was the "ideal" operation performed. Latterly cholecystectomy had been more frequently employed, as the writer believes this diminishes the risk of recurrence of biliary calculi.

The operative results were: 26 simple gallstone operations without a death; 27 slightly complicated gallstone operations with 6 deaths; 20 "seriously complicated" gallstone operations with 11 deaths. Total mortality, 23.3 per cent.

The final results were ascertained in 23 patients who had re-

covered from operations for gallstones. Three had died from causes unconnected with liver or gallbladder; 14 were alive and in good health without any return of symptoms; 4 complained of attacks of pain from time to time, but this was not of a colicky nature, but rather dragging, probably from adhesions. In no case was there any evidence of fresh gallstones having formed. In no case did a permanent fistula result. In 2 cases ventral hernia formed after operation for abscess in the neighborhood of the gall bladder. Even after operation for gallstones the writer enjoins care, e.g., more fluid, more exercise and more careful regulation of the bowels to prevent their reformation, and to cure the chronic cholangitis which is usually present.

He sums up his conclusions thus:

1. The removal of gallstones is not attended by serious risks in uncomplicated cases.

2. The continued presence of gallstones in the gall bladder and bile ducts leads to chronic inflammation of the neighboring tissues and organs.

3. This chronic inflammation is the chief cause of the complications which increase the danger attending operations for the removal of gallstones.

4. Early operations is the best method of avoiding complications.

5. Early operation demands early diagnosis. It is the duty, therefore, of the general practitioner to examine his cases of chronic dyspepsia with greater care, and not wait until attacks of jaundice, biliary colic, or even more acute symptoms make an examination of the gall bladder imperative. The earlier the diagnosis is made the less will be the average mortality of the operation.—*The Charlotte Med. Journal.*

Impermeable Stricture.

J. B. Deaver states that his experience has taught him that the the membranous urethra is the seat of inflammatory stricture, though ordinarily it is the bulbous urethra that is involved in deep stricture. He reviews the methods

of attacking impermeable stricture and condemns the blind perineal section. Incision exposing the urethra anterior to the stricture, which is the method most used, has the disadvantage that we are often unable to pass any instrument through the exposed strictured area and we have to either make a perineal dissection or carefully dissect backward to the dilated portion of the urethra until the stricture is laid open, and it has also the further drawback of misleading false passages. Cock's method is described in its original words, as he says it has been much misunderstood. The fourth method mentioned he calls Young's operation. It is incising the urethra through the tissue of the apex of the prostate after its exposure by the perineal method. Deaver says this has undoubted advantages, being carried out on definite and anatomic lines, and considers it the simplest procedure of all. The fifth method, including a primary or secondary suprapubic incision into the bladder as a preliminary to urethrotomy behind the stricture, is also condemned by him.

There are other methods, but he considers these five as the principal ones. As regards the treatment of the stricture area after it has been exposed, the older teaching was to drain and dilate. The more modern methods of excising the entire area and reuniting the severed urethra over, a catheter or supplying the excised tissue from other parts, Deaver considers too time-consuming to be used in many cases. He sees no reason, however, against removing as much as possible of the dense organized scar tissue: It is a help to nature's reparative powers and he believes there is less tendency to new contracture than with mere incision and drainage. Another point emphasized is that a perineal drain should be left after a perineal operation. It is his plan, after establishing a passage way, having excised all the dense scar tissue and having placed a catheter inside the bladder closed over with what tissue he can find in layers, to always bring the catheter out of the urethra to the point of stricture and fasten it to the anterior angle of the skin incision in the perineum. Whether another catheter is to be placed in the anterior penile urethra and brought out through the same wound is a matter for the judgment of the surgeon. He has had good results both with and without this addition.—*The Medical Brief.*

Operation for Aneurysm with Vascular Transplantation.

Unger sums up his paper briefly, as follows: After extirpation of a large aneurysm of the popliteal artery, the stumps of the femoral and anterior tibial arteries are united by a bridge which represents 15 cm. of the saphenous vein. This case ended successfully. The second case was one of arteriovenous aneurysm of the thigh, which was extirpated. The femoral vein was now sutured and the vena saphena used to fill the defective in the femoral artery. The result is not mentioned, but doubtless was successful. In a third case in which was vascular transplantation was practiced failure occurred, because the transplant was not healthy. The author regards this work as practically indicated in military surgery.—*Medical Record.*

MEDICAL

Fibromatosis of the Stomach.

Thomson and Graham (*Edinburgh Med. Journal.*) criticise other views that have been put forward and give their own conclusions.

The absence of characteristic granulation tissue and of endarteritis and a negative Wassermann reaction put out of court a syphilitic pathogenesis, though of course the possibility of a gumma of the pylorus causing stenosis is admitted.

A specimen showing cancer and tuberculosis was examined and led them to the conclusion that fibromatosis was neither directly tuberculous, nor yet due to the attenuated form of tubercular infection described by Poncet. They are also enabled to affirm most positively that fibromatosis may occur without the presence of cancer. Fibromatosis is an innocent affection of the stomach and is invariably associated with an ulcer.

When fibromatosis is associated with a deep punched-out ulcer, the mucosa over the surrounding fibromatosis may be normal.

This appears to indicate that submucous fibromatosis is not the cause of the overlying ulceration.

The changes in the mucosa are primary and the submucous fibromatosis is secondary. The diffusion of the fibromatosis from the submucosa into the mucosal coat, especially along the lesser curvature, and its sudden arrest at the pyloric ring, suggest that some irritant toxin is being absorbed from the ulcer and in its passage along the lymphatics sets up this marked reaction.

Since ulcer precedes fibromatosis it is fairly common to find cancer as well. Attention is directed to the interesting observation that fibromatosis of the duodenum has not been recorded. The duodenum, as we know, is practically immune to cancer, in spite of the great frequency of ulceration.

In fibromatosis there is often a palpable tumor, and usually no free hydrochloric acid, so the diagnosis of cancer is confidently assumed. Owing to the difficulty of naked eye differentiation from cancer and the total unreliability of "while-you-wait histology," the authors advise resection of the affected parts.—*The Charlotte Medical Journal.*

Hepatic Cirrhosis, Duodenal Alimentation In.

Duodenal alimentation was applied by the author in 6 cases of beginning cirrhosis. In 5, gastric ulcers were present; in 1, pure cirrhosis with dilatation of the heart. In each of the 6 patients the liver became markedly smaller already after two to three days, during duodenal alimentation assuming a size almost normal. In 4 patients the result was lasting. In 1, a few days after the termination of the feeding the liver began to grow larger, while in another, with pure cirrhosis and dilated heart, the liver quickly assumed its original large proportions. The influence of duodenal feeding in this case was very marked, but not lasting. The author's experience so far leads him to conclude that duodenal alimentation contributes greatly toward diminution of the functional work of the liver. This rest treatment is of benefit whenever the organ is considerably impaired.—Max Einhorn in *Medical Record.*

The Newer Theories in the Dietic Treatment of Diabetes Mellitus.

Tanz (*Med. Klinik.*, 1913) emphasizes the necessity of determining the point of tolerance for protein as well as for carbohydrates in each individual case of diabetes. In diabetes associated with nephritis, the diet should be regulated for nephritis as well as for diabetes, and especially with regard to the tolerance of sodium chloride. The good results obtained from oatmeal and vegetable days is probably due to their increased alkali content and the consequent neutralization of acidosis. Tansz says that Abderhalden's researches have proved that albumin, fat and carbohydrates develop protective ferments. Animal experiments have shown that it is possible for the body to produce ferments that aid in the splitting of the polysaccharids. In diabetes the metabolism is distributed by an overaccumulation of carbohydrates, and if it were possible to increase the amount of the activity of soluble ferments the carbohydrates might be oxidized to a greater extent. Tansz says that experiments are being conducted with this idea in view.—*New Orleans Med. and Surg. Journal.*

The Treatment of Diabetes with Rectal Injections of Sugar Solutions.

Luthje (*Therapie der Gegenwart*, 1913, liv, 193) reports good results from the administration of glucose solution to diabetics by rectal injection by the drop method. He says that the sugar is much better absorbed and utilized by diabetes when given in this way than when given by mouth. He has had especially good results in the treatment of acidosis by this plan. By the drop method most persons can absorb from the rectum from one to two liters of fluid a day. He uses a 5.4 per cent glucose solution, and hence the amount of sugar absorbed would be from 50 to 100 grams a day.—*New Orleans Med. and Surg. Journal.*

Treatment of Tenia by Thymol.

Artault (*Bull. de therap.*, Feb. 23, 1913), in all cases of tenia, gives crystallized thymol, 25 cg., in cachets daily, fasting. Generally the tenia is expelled on the third or fourth day, but it is advisable to continue the treatment for a week to insure the complete expulsion of the parasite. The process is simple, the tolerance is perfect, and the ill effects are *nil*. The author has treated twenty-three cases with perfect results, and recommends the treatment as the method of choice. The only precaution to be observed is that the patient shall abstain from alcohol while taking the treatment.—*British Medical Journal*, June 7, 1913.

Radium in the Treatment of Cancer.

A excellent article on radium appears in the December number of the American Review of Reviews, consisting of an interview with Dr. Howard Kelly, who is the president of the newly established National Radium Institute. Dr. Kelly recapitulates as follows:

1. Radium is not a specific cure for cancer. It does not take the place of surgery; it is another help to it. Cancer patients, in the early stages, as before, must submit to operation.

2. It is most useful in cancers on the outside of the body. In many of these cases it effects cures without pain and without deformity.

3. It is especially useful in connection with surgery, when it can be used to destroy vestiges of the tumor which the knife may have left behind. It can also be used to good purpose in irradiating the cancerous area preceding operation.

4. There are certain structures which can not be operated on—excised or seriously invaded—without disastrous consequences. Radium has cured inoperable cases of this kind. It is like a microscope knife which goes after the individual cell.

5. It is especially valuable in cancer of the uterus. Permanent cures even of inoperable cases have apparently been obtained.

6. It is effective only when there is no wide dissemination of the disease.

What makes radium particularly useful is the simplicity of the technique. It does not necessitate the use of an anesthetic, and its administration causes no pain and almost no discomfort. The radium salt is kept inclosed in a fine platinum tube about an inch long. This tube is again encased with lead, which is used because it acts as a filter, keeping in the alpha and beta rays—which are more destructive to normal tissue—while letting the gamma rays slip through. The tube, further screened with some soft substance, is then laid in immediate proximity to the diseased part; if necessary, it can be attached by surgical plaster; in some cases incisions into the diseased part may be made as recommended by Dr. Abbe. Its action upon the cancerous tissue begins at once; the application lasts from 4 to 24 hours. Sometimes in a month or six weeks the growth vanishes. The radium so used can be used over and over again. Most readers are now familiar with the much-heralded "miracle of radium"—the mysterious substance that apparently defies all the known laws of the material universe, in that it keeps giving off matter without diminishing its own bulk. Every little particle of radium has been giving off its rays for thousands of years, and will continue to be active for two thousand years longer, when it will have just half its present weight and just the same capacity for throwing out its rays that it has now, only lessened amount, so that a little bit of radium now in use may be inherited by generation after generation of enterprising surgeons.—*The Medical Herald.*

OBSTETRICAL

Gynecological Hints.

Ralph Waldo, in the *International Journal of Surgery,* offers the following practical hints:

In the past, hemorrhage or pressure symptoms have generally been the reason for removing uterine fibroids. In a few rare in-

stances gangrene of the tumors has necessitated their removal. More recent microscopical examinations of large fibroids have proved that about 5 per cent have undergone sarcomatous degeneration or carcinoma has developed in or about them. This is an additional reason for their extirpation.

It is seldom good practice to remove abdominal tumors by the vaginal route; on the other hand, where the vagina is large and the perineum relaxed, pelvic tumors can frequently be attacked from below. This is especially true when the uterus and growth are freely movable. Usually the anterior vaginal incision gives the most room. Tumors of the tubes and ovaries can easily be extirpated without removing the uterus. When possible, this route should be selected, for the mortality is lower and convalescence is much easier. Unless pus is found, it is seldom necessary to drain after opening the abdomen through the vagina.

Cardiac murmurs, unless accompanied by dilatation of the heart, are not a contraindication to anesthesia with ether for the performance of gynecological operations. In fact, most large uterine fibroids are associated with heart murmurs which usually disappear after removal of the growths. These murmurs are rarely present when the tumors are small; but develop late and seem in certain instances to coexist with more or less degeneration of the fibroids.

There are instances in which after a woman with a uterine fibroid has passed the menopause, the tumor markedly diminishes in size, and several years later malignant disease develops in the uterus. A degenerating tumor is always a menace.—*The Med. Brief.*

Treatment of Eclampsia by Morphine and Its Adjuvants.

Rouvier (*Arch. mens. d'obst. et de gyn.*) says that since we have not yet succeeded in getting an efficient remedy for the disease we must at least lessen the crises as soon as possible, and assist in the prompt elimination of the causative toxins. The author has treated twenty cases, of which two were without crises. An impartial analysis of these cases shows that the result of this treatment is more rapid and efficacious the earlier in the case the mor-

phine is administered. In gravid, parturient, or puerperal patients who have had eclampsia crises or are liable to these attacks, we should give three injections of morphine, separated by an hour's interval, followed by three others separated by two-hour intervals. In addition there should be instituted a water diet, and later still by full milk. Lavage of stomach and intestine are also to be employed. This treatment is of value in all cases which are threatened with eclampsia. If possible it should be given before the first attack as a preventive measure. As soon as an attack has occurred morphine should be begun. Small or medium doses should not be given, since time is wasted and good results are not rapidly obtained. Kidney disease is not a contraindication for morphine, as it assists the kidneys. Unconsciousness is also not a contraindication, as some authors believe.—*The Charlotte Medical Journal.*

The Internal Secretions and the Female Characteristics.

W. Blair Bell asks: What is it that makes a woman a woman? In answering this question he states that although the potentiality to produce femininity exists in the earliest stages of segmentation of the ovum, this potentiality is directed towards the future development and correlations of the endocrinous glands which are to control the sexual evolution of the individual. The ovaries alone are not responsible for the female characteristics. It has been shown that the suprarenal cortex is largely responsible for the secondary sexual characteristics. Although the genitalia may be normal morphologically at birth (primary development), they become functionally active only at puberty (secondary development) if the whole endocrinous system is in perfect harmony and acting efficiently. Thus, thyroid or pituitary insufficiency may cause the genital organs to remain infantile; and disease of these structures may cause retrogression in the genitalia even after they have functionated normally. Removal of the thyroid alone produces an intense degree of atrophy in the uterus. The ovaries,

however, do not retrogress; on the contrary, there appears to be increased activity, especially in the follicles. While suprarenal hypernephromata in male children are practically always associated with precocity of the sexual organs and secondary characteristics, in female children with suprarenal hypernephromata the sexual organs are not procociously developed, for the tendency is rather to produce in them the characteristics of the male—a deep voice, enlargement of the clitoris, hirsuties, and so on. An excessive ovarian secretion leads to an increase in sexual activity both locally and generally.

The local effects may be seen in an increased and prolonged menstruation. An excessive ovarian secretion affects the metabolism in the opposite way to oöphorectomy, and one of the most important metabolic disturbances is the abnormally large excretion of calcium salts. A few years ago Bossi of Genoa suggested the injection of suprarenal extract as an alternative to oöphorectomy. Apparently many cures have been effected by this treatment, and also by the injection of pituitary extract. Thyroid insufficiency always causes a decrease in or the complete cessation of the function of menstruation, according to the degree of insufficiency. Insufficiency of pituitary secretion is associated with amenorrhea or scanty menstruation. Various investigators claim for different portions of the pituitary body different functions, but the author believes in the unity of the whole gland. Patients with pituiary insufficiency are always obese and dull. An excess of pituitary secretion, such as occurs in acromegaly, produces masculinity, and while in the male this may give rise to excessive sexuality, in the female it causes amenorrhea and loss of desire, as is only natural if masculinity be produced.—*Medical Record.*

Editorial

PUBLISHER'S NOTICE—The Journal is published in monthly numbers of 48 pages at $1.00 a year, to be always paid in advance.

All bills for advertisements to be paid quarterly, after the first insertion of the quarter.

Business communications, remittances by mail, either by money order, draft, or registered letter, should be addressed to the Business manager, C. S. Briggs, M. D. corner Summer and Union Streets, Nashville, Tenn.

All communications for the Journal, books for review, exchanges, etc., should be addressed to the Editor.

THE LAY PRESS AND MEDICAL SUBJECTS.

Members of the medical profession, especially those of national reputation, can not be too careful in giving their opinions in regard to operations and methods of treatment which have not stood the test of time. In the first place, human judgment is too subject to error, in the second place, interviews are too easily distorted in order to make interesting reading matter. Our attention is called to this matter by the recent newspaper notoriety of the radium cure of cancer and in retrospect the treatment of tuberculosis, and the salvarsan treatment of syphilis. Untold harm has already been done and more is yet to come so long as men of national reputation give hasty opinions about treatments the efficacy of which time and experience alone can prove.

We read a great deal in the medical journals and lay press about salvarsan in one dose curing syphilis. At present few physicians believe that one dose of salvarsan will cure syphilis, on the other hand, most of the profession believe in giving several injections of salvarsan combined with the old mercury treatment; and in the later stages, mercury and potassium iodide. Yet the lay press has not had much to say on this subject, consequently there are many who, having had the injection of salvarsan with temporary disappearance of the manifestations of syphilis, believing themselves cured, have married or will marry innocent sicians believe that one dose of salvarsan will cure syphilis; on women who will suffer. Those that do not marry, as well as those that marry, are likely subjects for the later parasyphilitic affection of the nervous system.

Much of this suffering could have been prevented. Professor Ehrlich, so far as we know, certainly did his part toward checking the enthusiasm. We hardly think so much harm was done by the Friedmann treatment, because the profession, having only recently seen the failure of salvarsan to cure syphilis, a chronic constitutional disease, was more critical in regard to one or two doses of any preparation curing any chronic constitutional affection.

The radium cure for cancer is the latest lay subject and many now herald radium as the conqueror of that scourge of civilization —cancer—the ravages of which are annually increasing in every country, the etiology of which is apparently but little nearer solution than it was many, many years ago.

That radium will cure certain forms of cancer we do not doubt, in fact we know that locally applied it will cure certain cancers *locally*—three years without a recurrence being counted a cure—but that is as strong a statement as we care to make. If it cures these forms of cancer as well as the surgeon's knife it will be a boone to mankind, but so far science has not taught us any means of recognizing when the cancerous taint is removed and therefore it is wrong to say that anything cures cancer unless for the purpose of comparing cures, gathering statistics, etc., we set an arbitrary time limit just as has already been done.

We know comparatively little of the cancerous diathesis, the time of metastasis, and consequently it is wrong to delude the public by allowing any articles to creep into the lay press which may raise false hopes in that multitude of sufferers—the cancer army—which we all help to the best of our ability, pity from the depths of the soul and yet can not prevent from being drawn into that maelstrom of terrible suffering, the cancer death.

An Interesting Exhibit in Medicine and Surgery at the Panama-Pacific International Exposition.

One fact alone would make the exhibit in medicine and surgery at the Panama-Pacific International Exposition the most important of any similar display at any preceding exposition, for when

the world somes to San Francisco in 1915 to celebrate the completion of the Panama Canal, it will be divided in admiration of the two men who perhaps above all others are responsible, under the United States Government, for the successful termination of the gigantic work. And these two men are representatives of highest honor from the science of engineering and the science of medicine: Dr. William C. Gorgas, Colonel in the United States Army Medical Corps, is the physician who undertook to preserve the lives of the canal builders in a land of malignant disease, while the toilers were operating under the guiding genius of the great Colonel George W. Goethals of the Corps of Engineers, United States Army.

Representatives of the science of medicine and surgery from every land under the sun will be present during the exposition, to pay tribute to the doctor and incidentally to study the processes whereby the ravages of a disease ridden zone were stayed and the camp of the canal builders became the abode of health.

The element that alone would lend a distinctive character to the exhibit, is the featured presentation of the methods whereby the deadly mosquito was fought in his native haunts of morass and jungle; the application of especially devised sanitary processes by which Dr. Gorgas and his men were victors in their struggle with deadly fevers, enervating malaria and others of the swarm of maladies that wait for men who penetrate those miasmic lands "where even the birds forget how to sing." A complete demonstration of these methods, as well as the equipment that, under mans uses, achieved success, will be installed for the advantage of the world by the United States Government. It will excite the interest not alone of the medical fraternity, but of all such nations as are interested in the colonization of the topics.

The Emergency Hospital, another interesting feature of the exhibit in the department of medicine and surgery, scheduled in the exposition catalogue as "Group No. 35,,' will be a model emergency hospital, provided with its equipment entirely by exhibitors.

The law of averages works at expositions as elsewhere, and there will not be, even in 1915, in San Francisco, a suspension of the laws of gravitation, nor an annulment of the re-activities of

cause and effect. Where a million people meet, there will be, in spite of all precautions to the contrary, cases of sickness, and the foolhardy will be subject to the usual percentage of disaster. Hence the necessity for an Emergency Hospital.

This Emergency Hospital will be a model equipped by the leading manufacturers of the country, with the best instruments and appliances and stocked with every drug that physicians know.

Dr. R. N. Woodward, at present in charge of the United States Marine Hospital, situated near the Golden Gate, has been appointed by the Treasury Department to assume control of the Emergency Hospital at the exposition and he has taken great pride in assembling all of the elements, materials and equipment necessary for a model institution. How well he has succeeded, and is still succeeding, with the choice of the whole world's supply at his disposal, will be seen by the interested when the exposition is opened.

Although the entire equipment is not yet provided and while changes in what has already been selected may be made if, later, proffered equipment is preferred. Dr. Woodard is sure that the Emergency Hospital at the exposition will be as near perfection as human endeavor, working in this most enlightened age, can make it.

The superb examples of the skill of the manufacturers of auto-ambulances will be installed, an X-ray ward of the hospital; sterilizing apparatus; wound dressing appliances will be donated, and one manufacturer is providing even the spreads, with the seal of the exposition woven in the center, for the twenty beds that will be placed in the men's, women's, and isolated wards. Tables for minor and capital operations, the innumerable electric surgical appliances that human ingenuity has created, a library of medical books, a high power microscope with photographic apparatus and dark room for the development of negatives; and, finally, a cradle for the possible future president or countess who may insist, perhaps prematurely, on visiting the exposition.

It is not contemplated by the exposition's directorate that patients will be kept at the hospital over night, for it is to conform strictly to its classification as a hospital for emergency cases. If,

however, the patient's health were to be jeopardized by removal to his home or to another hospital, he will not be removed.

The installation of the Emergency hospital with the variety of the equipment thereof—from beds and stoves and other non-medical material to drugs, other and operating tables and other essentially surgical or medical material—might cause a confusion in exhibits were the scheme worked out with less careful consideration of all the exhibitors. Whereever the display normally would fall, whether in the department of Liberal Arts or Manufactures and Varied Industries, there the exhibit will be actually considered. Surgical instruments in use in the Emergency Hospital will be regarded as in the Department of Medicine and Surgery in the Palace of Liberal Arts and will there be subjected to competitive examination with the other exhibits, although manufacturers, judging by the applications for privileges of hospital employment of products, are not unaware of the greater advantage accruing to their exhibit when shown under working conditions. In any event, the jury of awards will be careful to consider that advantage and will not let it prejudice the display under glass cases in the Palace of Liberal Arts.

In the meanwhile the student of municipal affairs, the expert in town policing, as well as the doctor, the surgeon and the nurse, will be vastly interested and enlightened by the model Emergency Hospital at the exposition, where any case will be cared for, from that provided by a female exercising her inalienable right to faint, or that of a child after his first lesson in the immutability of gravity's law, to that of an impulsive infant whose ambition to occupy the pretty cradle will reflect more credit on his taste than his decorum.

Reviews and Book Notices

"Genito-Urinary Diseases and Syphilis"—By Edgar G. Ballenger, M.D., Adjunct Clinical Professor of Genito-Urinary Diseases, Atlanta Medical College; Editor Journal-Record of Medicine; Urologist to Wesley Memorial Hospital; Genito-Urinary Surgeon to Davis-Fisher Sanatorium; Urologist to Hospital for Nervous Diseases, etc., Atlanta, Ga., assisted by Omar F. Elder, M.D. The Wassermann Reaction, by Edgar Paullin, M.D., Second Edition Revised; 527 pages with 109 illustrations and 5 colored plates. Price $5.00 net. E. W. Allen & Co., Atlanta, Ga.

The appearance of this work in its second edition should be welcomed by the profession. We observe that the work is considerably enlarged and that it has undergone a thorough revision. The remaking of the book was demanded by the recent advances in the knowledge of genito-urinary diseases and syphilis in the last few years. Among these advancees may be noted the more satisfactory method of treating gonorrhea. The author speaks confidently of the method of sealing up within the urethra of argyrol and claims a cure in five or six days if the treatment is applied in the incipiency of the disease, vaccine therapy, pyelography, the Wassermann reaction and luetin test; the cultivation of the spirochæta pallida; the inoculation of animals with syphilis and the discovery of salvarsan and neosalvarsan are all treated of in the most instructive and interesting manner. It is a textbook fully up with the times and should receive a universal patronage.

"The Surgical Clinics of John B. Murphy, M.D."—At Mercy Hospital, Chicago. Vol. II, No. 6 (December). Octavo of 186 pages, illustrated. Philadelphia and London: W. B. Saunders Co., 1913. Published Bi-Monthly. Price per year, Paper, $8.00; Cloth, $12.00. W. B. Saunders Co., Philadelphia, London.

Our thanks are due the accommodating publishers for the December number of this always welcome quarterly publication. This number is especially replete with good things illustrating advances

and improvements in up-to-date surgery as practiced by this master surgeon. The first paper of the series is of itself worth the price of the entire volume. It is entitled "Tuberculosis of the Lung; Production of Artificial Pneumothorax by Injection of Nitrogen According to Dr. Murphy's Method." We have seen in our practice the wonderful results of artificially produced pneumothorax in tubercular lung disease and feel sure that as a method of treatment of this terrible disease it will in many instances be of great value. The other lectures of this number are valuable and instructive and serves to illustrate advanced surgery, especially in the management of diseases of bone. We urge upon everyone interested in surgery to subscribe for this excellent work.

"E. Merck's Annual Report of Recent Advances in Pharmaceutical Chemistry and Therapeutics. 1912. Vol. XXVI. E. Merck, Chemical Works, Darmstadt, 1913.

No physician who desires to keep in the van of therapeutical progress can afford to be without this thorough and carefully prepared report. The most recent advances and improvements in chemical preparations and the application of drugs in the treatment of disease are succinctly and clearly given. As a work of reference the manual should prove of incalculable benefit to progressive physicians.

"Progressive Medicine"—A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., Professor Therapeutics and Materia Medica, Jefferson Medical College. Assisted by Leighton F. Appleman, M.D., Instructor in Therapeutics, Jefferson Medical College, Vol. XV, No. 3, December 1, 1913. 411 pages. Illustrated. Lea & Febiger, Philadelphia and New York. 8 vo. Paper. Subscription price, $6.00 per annum.

We acknowledge with thanks the receipt of the December number of this quarterly. Under the able management of the distinguished editors the volume contains the fruit of the advanced work of the profession in every department of medicine and surgery. The contributors to this volume are all well known writers,

whose names stand for the excellent character of the work presented. This volume treats of the following: "Diseases of the Digestive Tract and Allied Organs, the Liver, Pancreas and Peritoneum—Diseases of the Kidneys—Genito-Urinary Diseases—Surgery of the Extremities, Shock, Anesthesia, Infections, Fractures and Dislocations and Tumors—Practical Therapeutic Refrendum." The practitioner can, by the use of this quarterly, see almost at a glance the advances and improvements in practical medicine and surgery.

Publisher's Department

Comparative Effect of Acid and Alkaline Solutions on the Fibrin and Tissues of the Blood.

"The contact of acid solutions or any other fibrin coagulating substance, such as bi-chloride of mercury, etc., with the fibrin of the tissues and blood, causes it to coagulate and to solidify, through which the capillaries do not readily pentrate, hence sloughing and a fertile field for germ growth is the result.

An alkaline solution (glyco-thymoline) on the other hand maintains the fibrin in a soluble form, preparing an easy way for and to protect the capillaries and other blood vessels, thereby susttaining and fostering cell growth, resulting in the rapid formation of healthy granulation."

"We think that all who have made a test of the action of tongaline, either in the acute stage of grippe, or in the period of convalescence marked by an extreme nervous disturbance so often present, will be convinced that the remedy has a direct and marked influence for good."

The usefulness of good hypophosphites in pulmonary and strumous affections is generally agreed upon by the profession. We commend to the notice of our readers the advertisement of "Robinson's Hypophosphites" in this issue. It is an elegant and uniformly active preparation; the presence of quinine, strychnine, iron, etc., adding highly to the tonic value.

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Original Communications

THE MEDICAL SIGNIFICANCE OF OLD AGE.

By T. D. CROTHERS, M.D., Hartford, Conn.

The term "old age" suggests general mental and physical decrepitude with feebleness and irresponsibility. From a little closer study, this is clearly not correct. Age can not be measured by appearance or years. While we fix the boundary line at seventy, and say beyond this, there is age and decline, this is also arbitrary and a conventional view.

The body at this time may be impaired and externally show signs of wear. The elasticity and vigor of earlier life does not appear in present activities, and yet there may be, and very often is, the fullest fruitage and flowering of all the long life up to this point.

Physiologically, psychologically and theoretically the very best bloom and perfection of life ought to culminate and grow on, after seventy far down to the even hundred. Comparative studies show that the human organism was intended to round out the full century and longer, that it was grown and developed with this ideal, and anything less than this is evidence of neglect, failure, wasted energies and so on.

To unthinking persons, such theories sound utopian, and yet they are based on and confirmed by the most accurate studies and

conclusions of physiological science. One fact equally well founded and sustained by evidence abundantly verifiable in a great many ways is, that every human body is the center of an unknown reserve power which is rarely called into requisition in the ordinary affairs of life.

The work of securing a livelihood, rearing a family, and providing for the necessities incident to everyday life, does not call on this reserve power which practically remains locked up, and for the most part, goes down to the grave unknown and awaits development and activity in the great beyond.

Most men and women never realize these great unused reservoirs of force and power, which under extraordinary emergencies come into prominence and startle the possessor as well as his friends. In actual life, every now and then, persons supposed to be ordinary men and women astonish us with wisdom, capacity and efficiency, which we never dreamed they possessed. The pressure of circumstances, the force of conditions, suddenly show a vigor and power that is heroic, admirable and startling.

The theories that are used to explain this unexpected development are vague and uncertain, and rarely indicate the real facts. Every now and then this outburst of force and power is seen late in life, and then the same trite theories and vague explanations follow.

Men and women past seventy are supposed to exhibit signs of degeneration, disease and weakness, and we are told that these are the diseases of old age. The same defects and degenerations when noted all along in earlier life are called by other names and tabulated in the books.

In this way we make a mistake in trying to fix the capacity and incapacity by some age limit, and some other external signs which are by no means confined to that particular time of life. Symptoms of physical bankruptcy, symptoms of decline, failures and decay are common to all states and conditions of life.

Heredity comes in as a very significant range of causes that are traceable to a large extent, and when the man or woman, far down towards the century mark, has had a good start from their ancestors, they stop, before half the life is over, someone has

blundered. Some collision has occurred that should have been avoided.

The real life, along the lines of nature, should exhibit vigor and strength, constantly increasing until long past three score and ten. While the coarser external senses and functional activities may show signs of weariness, the brain activities should widen, develop and come up to higher levels of living.

There is no question or doubt about the possibility of developing the highest kind of mental and conservative physical force, with the clearest comprehension of the duties and responsibilities of life, if we could only follow the great outlined paths, marked by nature and exact hygienic living.

The judgment of men and women, and their capacity for wisdom, discretion and wise adaptation of means to ends, should be a continuous growth from 20 to 70 and far beyond. A half a century of successes and failures, of experiences, of object lessons and literal studies from the lower to the higher, should clear away the dogmatism, the emotionalism and correct the distorted vision and reasoning, and leave them on a higher plain of physical and mental capacity.

Life should be a continuous schooling and training, with growth, first in one direction, and then in another, but beyond this, a continuous movement upwards, towards the fullest possible flowering and development. This is a mere statement of what is so evident, and so amply confirmed, and so thoroughly possible in every way.

The diseases of old age are literally the wreckage of mistakes and blunders in the past. The misconceptions and failures to adapt oneself to the surroundings, and take advantage of conditions and not be driven by them, is seen in the diseases, incapacities and palsies which follow. The great reserve powers have been burned up, cramped, held down and practically made useless. Many a noble man and woman has gone down through life oblivious to the capacity they possess, and their whole life has been a continual crushing out of the highest possible resources and fields of activity that should have been developed and gone on into the world to come.

These facts are not only beyond all question or doubt, but are startling in their practical significance. We ask ourselves, is it true that we possess powers unknown and capacities which we never put in service, and are we wasteful and negligent of the forces that are used in everyday life?

The question comes up in many ways, is the old man at 70 or 80 able to wisely dispose of his property or plan for the future, or advise soundly concerning the facts of the present? Is the good old mother or grandmother, with whitened hair and perhaps crippled, competent to determine the proper course and direction for the best interests of all? How are we to determine these facts? We can not from law books and discussions of the disabilities of age.

The expert assumes that the present conditions of the aged man or woman are the guide that his or her memory, judgment, emotional control and capacity to understand and realize the surroundings will determine this question. If he finds indications of dementia, paranoia, melancholia, delusions and any sort of degeneration, they are reliable guides by which the facts can be determined.

In this he is greatly mistaken. Conclusions drawn from these facts alone will be misleading and work great injustice. Old age and capacity of men and women past 70 must be studied from a wider point of view.

A knowledge of heredity, of culture, of training, of surroundings, of occupation, of successes and failures, and their effects on the growth and development, and the influence they have had in fashioning and shaping the present conditions. These are the formative forces from which we can judge of the present capacity.

What have all the years of strain and stress, of successes and losses, of nutrition, of diseases and the incessant ebb and flow done to disable or to increase and develop the great reserve power and give a larger, clearer view to life? These are the questions that enter into the problem.

Degrees of dementia and paranoia, and even melancholia, may be only surface shadows, obscuring mental vigor and wisdom that is entirely unsuspected. For nearly forty years I have been in

constant contact with persons disabled and crippled by heredity, by spirit and drug taking, and other excesses which have precipitated old age and broken up the resources of the present. Persons who have been suddenly driven to the very borders of physical and mental bankruptcy, and who in the stress and strain and storms exhibit evidence of the great reserve power—the subconscious as it were--flashing up out of the darkness, asserting itself, and then disappearing.

I have seen in these physically aged men and women intimations of force and vigor that was startling, and with it incapacity to put into service the great reserve power which they possessed. Like a mighty engine with capacity for drawing an enormous load at high speed, and yet so crippled as to be hardly able to move.

The mental integrity of such persons is not to be judged by narrow conventional views, or by theoretical conceptions and traditions of what is considered sound and sane. There is a whole long life of experience of retrogrades, successes, of disappointments, of movements, and of environments and influences that has contributed to make the flowering of life after 70. Has the decline of the physical extended to the mental? Has fear and cell palsies taken possession of the brain? Has remorse and sorrow settled, and pessimism clouded every hope and aspiration of the present? Or has the opposite developed in the mental world? The medico-legal questions will hinge very largely on these.

The physical condition of the man and woman past 70 may be unnoticeable in any particular degenerative way. The mental state he is in may indicate soundness and sanity. The old man may be dogmatic and narrow. His conception of the past may be dwarfed, and the failure of his aspirations either open or concealed has dimmed his mental vision. On the other hand, out of the conflicts of the past he has come into a sundown of satisfaction and serenity, but with a clear consciousness of having passed through with his mind clear and appreciative.

Often elderly men and women exhibit an unusual optimism and hopeful looking out into the future, notwithstanding defective physical conditions. These have rare attainments not expressed

in words, but evident in many ways. In such persons there should be no question of capacity or clearness of vision. In the question of a will in which several million dollars were involved, this condition decided the sanity of the testator, which eventually was confirmed. In my opinion there was good judgment and sound appreciation of the conditions at the time the will was written, although doubted by a number of experts.

The man had had a stormy life and many serious physical disabilities and was finally laid away with a number of most serious defects, and yet through it all there was a clearness of comprehension and a mental pose that gave him a higher view than his associates.

Evidently he had drawn on his reserve power and was always conscious of success, no matter what the conditions were. There was no idea of bankruptcy, either here or hereafter, it was a triumphant march overcoming difficulties, or being crushed by them, only to rise again.

This man was sane in the broadest sense of the word. It is an intuitive conception of this great reserve force that keeps the sanity of men and women above the depressions and diseases of life. This enables them to rise superior to all failures, losses and crosses and keep on growing through all the years. This is sanity, capacity and idealism, that passing down through and to the twilight of age, growing brighter and better for a more perfect life in the world to come.

The great majority of men and women live along very low levels and are constantly influenced by environments with little or no incentive except to supply the coarsest physical wants. With them the question of sanity and capacity is largely dependent on the organism. They are like fleets of ships leaving New York for Liverpool without any strong motive or purpose, and without proper equipment or capacity for adaptation to overcome the waves and storms before them. They become disabled, lose their charts and reckonings and drift and finally go down. Nothing has been accomplished, no purpose of life has been realized. The great reserve power is unknown and the mind like the body becomes more and more crippled, until finally it is gone.

Other ships are in constant touch with all the surroundings, struggling to avail themselves of every condition that will facilitate the voyage, and whatever happens have the one great object and purpose foremost, calling on the reserve power and living in that consciousness of success and triumph, that finally reaches its attainment.

The great armies of the submerged and the incapables have no consciousness of their possessions and make no effort to do more than what is absolutely required of them, and are without ideals or great plans and purposes, but are simply drifting. They are the persons about which center questions of jurisprudence and doubts as to the justice and fairness of conduct and events. They are the persons about whom questions of age and disability are constantly recurring.

Is it possible to repair those defective ones and make the last years of their lives overcome many of the obstacles of the past? Science knows no limits to the possibilities of development and repair. Appeals to the hidden forces we carry about with us, and efforts to put them into activity and make them contribute to lengthen life and rise superior to disease are yet in the dawn of the coming science.

Old age and its particular diseases are relative terms. Who can say what will come, what will appear, what will grow out of this startling march into the unknown realm, where laws of the physician and psychical are to be discovered and put into force?*

*Blakiston, Son & Co., of Philadelphia, Pa., has recently published a work "On the Medical Care and Treatment of Old Age," by Dr. Nashure, which opens up a new field for study and practice.

Proceedings of Societies

TRANSACTIONS OF THE CLINICAL SOCIETY OF THE NEW YORK POST-GRADUATE MEDICAL SCHOOL AND HOSPITAL.

(Stated Meeting, November 21, 1913, the President, R. H. Halsey, M.D., in the Chair.)

SYMPOSIUM ON DIABETES.

"Glycosuria."*—By Ludwig Kast, M.D., Adjunct Professor of Medicine in the New York Post-Graduate Medical School and Hospital.

The normal human urine contains only a very minute trace of sugar. If an appreciable amount of sugar occurs in the urine, we speak of glycosuria. If on an ordinary diet glycosuria persists for some length of time, we speak of diabetes.

The absence of sugar in the normal urine is due to the ability of the secreting cells of the kidney to retain the sugar in the blood. The circulating blood contains in the normal individual not more than 0.1-0.2 per cent of sugar. Such amount of sugar is safely retained by the kidneys, but under certain conditions the secreting cells of the kidney do permit an appreciable amount of sugar to escape from the blood into the urine. Such changes in the secreting cells of the kidney can be produced artificially. Von Mehring has shown that injections of phloridzin will bring about a temporary glycosuria in the animal as well as in man. It is possible that under certain pathologic conditions changes occur in the human kidney similar to those produced by phloridzin. In such

*Read before the Clinical Society of the New York Post-Graduate Medical School and Hospital, November 21, 1913.

cases the glycosuria and the diabetes is due to the kidney itself, and we deal with a nephrogenous diabetes.

In the overwhelming majority of cases, however, in which glycosuria is found, the disturbance is not due to the ability of the kidney to retain a normal amount of sugar in the blood, but it is due rather to an excess of sugar in the blood. The sugar of the blood, so to speak, overflows into the urine.

If, for instance, a certain amount of sugar be injected into a peripheral vein the percentage of sugar in the blood will rise, and the greater part of the excess will pass into the urine. If the same amount of sugar be injected into the portal vein, all of most of it will be retained by the liver and no glycosuria will follow. The human organism is exceedingly anxious to maintain the normal percentage of sugar in the blood.

An increased amount of sugar in the blood is called hyperglycemia. Experience has shown that nearly all cases of glycosuria are due to hyperglycemia.

The normal blood must constantly give up sugar to the muscles and other organs for the chemical processes of combustion. That which is burnt up in this manner is very soon replaced by sugar poured out from the liver. The liver is the organ which receives all sugar from the intestines; it is the storage place for the body reserve supply, and it controls the amount of sugar in the circulating blood; it acts as a filter between the portal system and the general circulation, passing to the blood from time to time such quantity as is needed and retaining in the form of glycogen that which is not needed.

It is therefore the liver which is mainly responsible for hyperglycemia and its consequences, glycosuria and diabetes. Diabetes so produced is called hepatogenous diabetes; but experimental facts have shown that it is not the liver alone that is responsible for hyperglycemia.

As the controlling station of the sugar supply, the liver must necessarily receive signals when to pour out more sugar and when less. These signals originate primarily in the muscles, but also in other organs, and it is definitely established that there exists between a number of organs a complete system of mutual

reflex associations which in health govern the sugar metabolism. These reflex associations are in all probability carried out less through the nerves than through internal secretions. Any of the organs, or several of them, may become abnormal in their internal secretion, and in this way disturb the normal balance of the sugar in the blood, and lead to hyperglycemia and glycosuria. Such organs are the pancreas, suprarenal glands, thyroid, hypophysis, the brain and the muscles.

Thus far we have assumed a normal amount of sugar and other carbohydrates in the food. It must now be stated that the warehousing capacity of the liver is limited. If in a relatively short time too much sugar is poured into the liver by the portal system there occurs an overflow into the circulation and in such cases we speak of alimentary glycosuria from sugar. Glycosuria occurring under such circumstances is a physiologic process. Individuals differ in their capacity in this respect. The usual test is to give the patient 100 g. of dextrose in water about two hours after a very light breakfast and for the next twelve hours to examine the urine for sugar. From the results of such test conclusions may be drawn concerning the sugar tolerance of the individual. While the tolerance for sugar is limited, it seems that the normal individual has an unlimited tolerance for starch. This is due, apparently, to the fact that when bread, rice or potato is ingested, the transformation into sugar proceeds only to such a degree and only with such speed as is compatible with the storing capacity of the liver. In some individuals, however, a large amount of starch will cause hyperglycemia and glycosuria. Such individuals have a lessened tolerance to carbohydrates in general, and for practical purposes it is well to consider glycosuria *ex-amylo* with suspicion, because experience shows that it frequently is a condition which precedes the outbreak of a renal diabetes, or is an expression of a latent diabetes.

Alimentary glycosuria from sugar occurs very often in traumatic neuroses, Graves' disease, severe alcoholism, after hemiplegia, during pregnancy, chronic lead poisoning, and in other conditions, like infectious diseases, carbon monoxide, amylnitrite, sublimate, morphine and other toxic conditions. Also, alimentary

glycosuria is always found in patients suffering with diabetes shortly ofter a successful treatment.

Glycosuria usually means dextrose in the urine, but occasionally there occurs levulose or lactose or pentose; for practical purposes these sugars have a very limited importance.

Thus far we have assumed that glycosuria is a consequence of hyperglycemia and that hyperglycemia is a symptom of disturbed sugar distribution. We must not overlook the fact, however, that in some cases of diabetes, glycosuria may still persist after all the sugar in the food and all the glycogen in the liver has been used up; that is, glycosuria may at times occur in patients who are on carbohydrate starvation. Such cases undoubtedly produce sugar from protein and fat.

If an appreciable amount of sugar appears in the urine usually there is also a proportionate increase in the quantity of the urine. Glycosuria and polyuria nearly always go together. The reason for this is the desire of the kidney to eliminate the sugar in such concentration as it is able to handle with its secretory limits.

There are a large number of other important factors that have their bearing upon glycosuria, like the question of acidosis; but these factors have their bearing only in so far as they relate to the hyperglycemia, and they will be taken up and fully discussed, I am sure, in the papers which follow tonight.

Summarizing, one may say: Glycosuria is a symptom and it depends upon hyperglycemia. Hyperglycemia is a disturbance of the sugar metabolism which in turn is due to a variety of causes. We know that a number of organs are involved in the problem of sugar metabolism; we also know that the organs of internal secretion are the ones primarily involved. The real nature of diabetic disease is, however, not yet clear. For practical purposes it is of utmost importance to realize that there is behind the glycosuria a complex of disturbances which lead to other symptoms. Glycosuria is only a symptom and as such it is not properly an object of treatment. Of course in our management of diabetes we deal constantly with glycosuria and we are guided by it because it is such an easily accessible symptom; but to make the suppression of glycosuria the main object of our treatment would be a dangerous mistake.

"Diabetes Mellitus: Treatment and Clinical Tests"*—By Herbert S. Carter, M.D., Assistant Attending Physician, Presbyterian Hospital, New York; Consulting Physician, Lincoln Hospital, New York.

The hope and the Will-o-the-Wisp in the treatment of diabetes mellitus has long been the discovery of a specific treatment for this disease. Many drugs have been tried and some of these have distinct value from a symptomatic point of view, but none of them have proven of use in combating the disease, so that little by little the treatment of this condition has been narrowed down to the regulation of the diet, which, by long odds has given the best results.

Among the dietetic treatments for diabetes, von Noorden's regimen holds perhaps, the first place, and may be summed up as follows:

Whatever may be the underlying organic lesion in a particular case the result is the same, namely, that the power of properly metabolizing carbohydrates is impaired to a greater or less degree and the object sought in dietetic treatment is to find the limit of the individual's carbohydrate tolerance and then by a slow system of gradually increasing the amount of starch or sugar re-educate the system in its lost power to as high degree as possible, always remembering that these cases can never go back to a free or unlimited use of carbohydrates.

The exact form which the dietetic treatment of diabetes should take must depend on the severity of the case and for the sake of clearness on this point we may arbitrarily divide the cases into:

1. Mild, without acidosis.
2. Moderately severe, without acidosis or with moderate acidosis.
3. Severe, with marked acidosis.

In one and two the first step is to find the individual's capacity for metabolizing carbohydrates, which is done as follows:

A gradual reduction in starch and sugar in the diet is made

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each day, using less until at the end of five to seven days the patient is taking none of either. If at this point the patient is still excreting sugar in the twenty-four hour urine (and twenty-four hour specimens are necessary to an accurate diagnosis of the condition and to successful treatment in the early part of it at least), he should be put on the standard diet with restricted protein. If, however, the urine is sugar free after one or two days of carbohydrate free diet, or before that point is reached, the patient is allowed the standard diet with 100 gm. (3½ oz.) of white bread divided between the three meals. The second twenty-four-hour specimen is then examined and if no sugar is present increase the allowance each day of white bread by one-half an ounce until sugar just shows in the urine. The last point at which the urine fails to show sugar represents that patient's carbohydrate tolerance.

The standard diet plus one-half of the carbohydrate tolerance is the diet this patient should be put on, *e. g.,* if the point of tolerance is 60 gm. (2 oz.) of white bread, then 30 gm. or 1 oz. is all the patient should be allowed divided between the three meals. It is here that a table of carbohydrate equivalents is of the greatest use as it permits the use of foods more bulky than bread but of relatively less carbohydrate value.

This means, of course, that the carbohydrates must be weighed and at the outset it must be understood that this is the only satisfactory way to arrive at an accurate conclusion as to what constitutes the individual's carbohydrate tolerance and the only way to use the diet successfully.

Of course, later the eye becomes well trained to judge amounts and scales may be dispensed with.

The reason that it is necessary to allow only one half the amount of the carbohydrate tolerance is, because, while the urine becomes sugar free on the full amount of the tolerance, the blood does not always, and in order to reduce the sugar content of the blood to normal or as nearly as may be, the lessened amount of carbohydrate only is allowed. No increase should be made in the allowance until from one to three months, depending upon the severity of the disease, unless of course, an acidosis should de-

velop which would require the use of the diet as outlined for oatmeal days. The increase must be made gradually, the object being to allow little by little more carbohydrate, but not enough to have it show in the urine.

Should the urine not become sugar free on the standard diet without carbohydrates, the standard diet with restricted protein should be used. If this results in a sugar free urine then after a short time the full standard diet can be again tried, as often the restricted protein will make it possible for the organism to take more protein than at first, without the appearance of sugar in the urine. From this point one proceeds as in the first instance.

In the severe cases with more or less marked acidosis, it is best to put these patients at once on the oatmeal diet and keep them on it from two to ten days regardless of the sugar in the urine, giving them at the same time large doses of bicarbonate of soda in the attempt to render the urine alkaline, a thing always ways to be desired and tried for in these cases. Should the acidosis grow distinctly less but the sugar still be considerable, the patients are usually benefited by two days on the green diet, "green days" as they are called, going from that to the standard diet with restricted protein if the lessened degree of acidosis will permit, and from there to the full standard diet, if possible, after a few days. If, however, the acidosis increases in the "green days," one must return to the oatmeal diet again until that danger is past.

Oftentimes a series of diets in succession are valuable and Von Noorden's routine in a severe case is two days restricted protein diet, two days green diet, three days oatmeal diet.

Often a patient becomes sugar free on this plan even while on the oatmeal and the organic acids drop down promptly. These seven days constitute a "set." We then go back to the diet with restricted protein. If sugar appears again repeat the "set"—by this means one can often get a patient so they can again take a little carbohydrate and gradually increase it, always aiming to keep below the point of actual carbohydrate tolerance.

One other indication for the use of the oatmeal days is, when

in the course of the disease the patient's stomach or bowels become upset, nausea, vomiting or diarrhoea ensuing.

About three years ago, Dr. Wilhelm Menyhert of the First Medical Clinic of Budapest, published an article on "A New Therapy in Diabetes." His most recent monograph has been translated by Dr. Richard Kovacs, through whose courtesy I am able to present what follows:

Under the title of "Etiology of Diabetes Mellitus and A New Therapy," Dr. Menyhert gives the following description which I offer for what it is worth. It is on the order of a specific treatment and while many attempts have been made by others to influence sugar metabolism by means of artificially prepared glandular extracts, the results obtained by Menyhert seem quite worth further consideration.

He says that on the basis of his experiments there must be some ferment present either in a preformed manner or else a ferment formed during later chemical changes which forms sugar, not only from carbohydrates but also from protein and fat. If such a saccharificant prevails it will form sugar from everything which is not held firmly enough by the proteolytic and liptolytic ferments, these latter he calls the equalizing ferments. Diastatic ferment is found everywhere in the circulating lymph, but in the duodenum and jejunum only do we find all three ferments. The formation of the diastatic and equalizing ferments occurs in the healthy organisms in such a manner that through their harmonious action the balance of physiological metabolism of the healthy organism is maintained. So if we remove the only gland which is able to produce the equalizing ferments and only the diastatic ferment is left (as it is found universally in the tissues normally), which under these conditions will form sugar not only from carbohydrate but also from fat and protein, consequently glycosuria must occur.

So he contends that the underlying cause of diabetes is a disturbance in the precentral balance of the secreted ferments and that the ferments are not secreted in ratio to the food intake and the saccharificant ferments prevail. It is therefore clear how a restricted carbohydrate intake is of advantage, for through this

restriction the amount of saccharificant which remained free, can get possession of the quantity of sugar needed by the organism, only by struggle with the equalizing ferments. If in spite of this there is still glycosuria it is necessary to restrict the proteins and fats which are not held by the equalizing ferments. He believes that diabetes is partly due to a disturbed preparatory chemism mainly through the pathological chemism of the intestinal tract. So far they have not learned yet to influence the production of these ferments. It is therefore necessary to use artifically prepared products. He allows the patient to satisfy the appetite on the prescribed diet—although he finds it much less necessary to restrict the carbohydrates than on the von Noorden regimen. During the past six years he has not lost a single case, although he only took for treatment the severe grades of diabetes that had been treated by older methods. He does not pretend that this treatment results in "*restitutio ad integrum*" as care must always be taken with the diet.

The first step is thorough alkalinization of the intestinal tract by giving sodium hydrocarbonate in .5 gm. keratin coated pills. A maximum to forty to fifty pills per day, testing reaction of stools and urine. He disapproves of soda bicarbonate by mouth as it is only the superfluous alkali after neutralizing the gastric juice that gets into the intestine.

It also interferes with the proper formation of the acid peptones and we want to make every effort to strengthen, not weaken the organism of diabetic patients.

The next step is replacement of the ferments, by giving one hour before meals for the protein ferment, 3 gm. Papain (keratin coated) and dissolving only in the intestine, to take the place of the missing proteolytic ferment. If these substances have the desired effect the preparatory chemism will deal with the food in a physiological way. He also makes use in certain cases of the liptolytic ferment, steapsin, 3 gm. keratin coated, one hour a. c. The number of these pills depends on the quantity of food, usually six to eight of the Papain or as he calls them "Alumil" pills. As the acetonuria is dependent on pathological fat splitting, this is usually quickly eliminated by the steapsin pills. So by restrict-

ing to a certain degree the excessive carbohydrate intake and making sure of a complete metabolism of the fats and proteins in an alkalinized intestine, he feels that his results are much more satisfying and with less hardship to the patients than by the older method.

Selected Articles

THE ANTITOXIC FUNCTIONS OF THE THYROID IN THE PATHOGENESIS AND TREATMENT OF GOITER.*

By Charles E. de Sajous, M.D., LL.D., Philadelphia.

Althought what has been termed "detoxicatory" functions have have ascribed to the thyroid gland, the relationship that this function might have with the pathogenesis of goiter has escaped attention. Authors are in accord as to the fact that the disease is due to some form of intoxication, whether the still obscure agent be calcium, some other water-borne inorganic poison, a bacterial toxin, etc. Such being the case, we have reasonable ground for the belief, in keeping with the teachings of modern research, that this poison excites in the body a defensive reaction. If the line of reasoning submitted in this paper is correct, therefore, we must add to our present conception of the pathogenesis of goiter the postulate that the causative agent in a given case acts by awakening, in the thyroid gland and its accessory parathyroid glandules, a reaction having for its purpose the destruction of that pathogenic agent.

This involves, first of all, the necessity of showing that the thyroid apparatus—by which I mean the thyroid and parathyroids—is capable of carrying on such functions. The fact that these organs jointly destroy certain poisons has long been known. Some authors held that the antitoxic process occurred in the gland itself; others that it was effected by means of a secretion or secretions contributed by the organs to the blood, the antitoxic process being carried on in the blood itself. The bulk of evidence soon

*Read by invitation before the Cumberland County, Me., Medical Society, December 19, 1913.

showed, however, that the latter process was the true one. Striking in this connection is the fact that while removal of the thyroid and parathyroids produces tetany, now known to be due to the accumulation of certain organic poisons in the blood, the administration of these glands or grafting counteracts at least for a time the morbid effects of the operation. That the organs had for their functions to destroy these organic poisons is therefore evident. The identity of the poisons thus destroyed is suggested by the fact that the paroxysms are far more severe when the experimental animal is fed meat than when a milk diet is adhered to. Moreover, the blood of thyroidectomized animals has been shown to be toxic to other animals. On the whole, we should, as I urged eleven years ago, ascribe to the thyroid both metabolic and antitoxic functions. Swale Vincent wrote recently: "The most usually accepted theory is that the thyroid manufactures an internal secretion which is essential to the proper growth and normal metabolic functions of the whole body," and, furthermore, that "this may easily and reasonably be combined with the antitoxic theory. It may be supposed,' 'adds this author, "that the function of the internal secretion is to prevent poisoning by the products of body metabolism or by infections from without." He further summarizes much evidence, that I will spare you, by the remark that "the extreme liability of thyroidectomized animals to various infective conditions is strong evidence in support of this view." My own contributions to this idea will be submitted later.

When I ask you to associate this antitoxic function with goitetr, it becomes necessary, however, to account for the enlargement of the thyroid gland which constitutes this disease. Here, we must not lose sight of the fact that many varieties of goitrous enlargement are recognized, precisely as the heart is subject to enlargement from many different causes. We consider cardiac enlargement as a mere symptom, whereas in the case of goiter we give the same enlargement the predominating role, slighting the many other features of morbid processes at least as varied as those met with in the heart. Again, we overlook the fact that the thyroparathyroid apparatus, like all other organs, is subject to many

widely different organic disorders. Just as carcinoma, sarcoma, fibroma, cyst, angioma, degeneration, hypertrophy, and other familiar morbid changes occur in the heart muscle, so do we have a correspondingly great number of pathologic conditions in the thyroid apparatus. The symptom-complex of each of these must be as clearly identified, therefore, as any heart disease, in order that it may be treated intelligently and disappearance of the growth caused—if the morbid changes in the organ are not sufficiently advanced to defeat all efforts in that direction.

The surgical removal of a goiter is not a cure for goiter; it means the removal of a once useful organ which has been permitted, through neglect, to reach a condition of invalidism, partial or complete. Worse even than an amputated leg—which, by the way, does not mean a cured leg, but a buried leg—loss of the thyroid may mean, particularly in children, deterioration of the entire organism, including the organ of mind. So utterly oblivious are writers in this direction that some text-books of medicine do not even refer to goiter, leaving it entirely to surgeons to describe the disease from their viewpoint, which reduces itself to descriptions of pathology of fully developed growths, their physical characteristics, the pressure symptoms, and the surgical procedures indicated. Of their pathogenesis, that is to say, the relations between cause and effect, nothing; of the relations between the growth and bodily functions, nothing; of the process through which the occurrence of goiter could be prevented, nothing; of the methods by which the functions of the thyroid can be restored to normal limits, nothing. Yet, rightly does the surgeon remain within his sphere; the physician has, so to say, allowed the disease to develop beyond his own reach. And so will it continue, in my opinion, until the physician makes the *functions* of the thyroparathyroid apparatus the basis of his researches on the diseases of these organs, and bases his prophylaxis and treatment on the relations between cause and effect, which means, from my viewpoint, the relations between intoxication, from within or without, and the effort of the thyroparathyroid apparatus to destroy the poison.

We have seen that Swale Vincent, in summarizing our knowledge on what he terms the "antitoxic theory," refers to the new-

established fact that the purpose of the internal secretion of the thyroid—including that of the parathyroids, I would say—is to prevent poisoning by products of metabolism and also, using his own words, "by infections from without," and that,, moreover, thyroidectomized animals show an extreme liability to infective conditions. When to this we add the familiar fact that pregnancy causes enlargement of the thyroid, often sufficient to be detected by palpation and inspection, the evident purpose being to take part at least in the destruction of the excess of wastes and detritus derived from the developing fetus, we must admit that a wide range of action is to be allotted to the thyroparathyroid apparatus.

It was this wide range of action which led me, as far back as 1903, in the first edition of my work on the "Internal Secretions," to connect the thyroid with the processes grouped under the term "immunity." I then advanced the view: (1) that the secretion of the thyroid (as one of the component organs of what I termed the adrenal system) was an active factor in the immunizing process; (2) that it took part indirectly in this process by increasing the functional activity of the adrenals and general oxidation and metabolism, and (3) that the resulting increase of functional activity in the organs which produced protective substances correspondingly augmented in the blood the quantity of these substances—then known collectively as Buchner's alexins.

Four years later (1907), these conclusions, including the participation of the thyroid secretion in the general process of immunity, received additional, and what appears to me conclusive, support. Miss Louise Fassin, of the Bacteriological Institute of Liége, summarized a series of investigations in the following words: "The first series of my experiments, in a large number of animals (dogs and rabbits), showed that the subcutaneous injection of thyroid product (fluidextract of the fresh gland) is rapidly followed in the serum by an increase of alexin, a substance discovered by Buchner, generally considered as playing an important role in the defense of the body. This increase becomes evident as early as ten minutes after the injection; it becomes accentuated after one hour, and reaches its maximum in twenty-four hours; then the proportion of alexin in the blood recedes

more or less rapidly until the normal is reached. The effects of one injection rarely last less than twenty-four hours or more than two or three days." She also found that the oral administration of thyroid brought about corresponding effects. I may recall, moreover, that as shown by Reid Hunt, an overactive thyroid gives rise to an increase of organic iodine in the blood, and that as far back as 1903[1] I urged that the antitoxic activity of an antitoxic serum coincided with the proportion of thyroiodine it contained.

To control these results as to their direct relationship with the thyroid, Miss Fassin performed complete thyroidectomy in nine animals. One alone, however, survived the operation more than fifteen days; tetany occurred in all, thus showing that the parathyroids had been completely removed. "In all the animals operated on," she writes, "there occurred a marked diminution of the hemolytic bactericidal alexin."

While this clearly shows an intimate relationship between the thyroid and the general immunizing process, it does not tell us what the excess of thyroparathyroid secretion represents in the blood. Study of this question led me to conclude in 1907 that it was the constituent which Sir A. E. Wright had termed "opsonin" and which before him Denys and Leclef, Bordet, Nolf, and others had identified as "sensitizing substance" or "sensibilisatrice." This view was also confirmed by other investigators. Referring you elsewhere for detailed evidence,[2] I shall merely submit that Leépold-Lévi and H. de Rothschild, of Paris, write in this connection in the second volume of their work on "Physiopathology of the Thyroid Gland:" "Sajous has attributed, among the functions of the thyroid body, a role to the latter which he assimilates to that of opsonins and to autoantitoxins. More recently, Miss Fassin, M. Stepanoff, and M. Marbé have confirmed on their side the influence of the thyroid on the blood's asset in alexins and opsonins." Miss Fassin and M. Marbé have done more than this: Since by removing the thyroid body they

[1] "Internal Secretions and Principles of Medicine," 5th ed., vol. 1, p. 762.

[2] New York Med. Jour., Nov. 11, 1911.

inhibited the production of opsonins, they also sustained my opinion that the thyroid apparatus is the source of opsonins. Lorand, of Carlsbad, also referring to the confirmation of my views by European investigators, states that this proves further "the intimate relationship between the thyroid and our immunizing functions." Frugoni, moreover, found that thyroid gland markedly raised not only the opsonic index of tuberculous animals, but also the active germicidal power of their blood.

This must suffice to show that the thyroid gland—including always its parathyroids—is intimately connected with the autoprotective or immunizing functions of the body. Such being the case, and knowing that goiter, at least in some of its forms, is due to intoxication from some poison, organic or inorganic, I have also good ground for the belief, in view of the fact that infections, toxic wastes, etc., cause enlargement of the thyroid, that a defensive reaction of that organ accounts for the development of goiter.

While the disease may be the result of prolonged overactivity of the gland, characterized by typical histologic lesions of hyperplasia and hypertrophy, with symptoms of, hyperthyoidism, these lesions may also occur in a gland which is unable, even under violent stimulation, to react adequately to the poison. Driven, nevertheless, to inordinate activity, it undergoes violent congestion, thus causing the development of a relatively rapid form of the disease. A description of this form, which has been termed "acute goiter," because it sometimes appears with relative suddenness—though differing totally from true acute goiter due to local congestion—and also "epidemic goiter" because several cases sometimes appear within a short period, will illustrate the difference between this and another form to be presently described.

In the *hyposecretion goiter*—we will term it for the sake of convenience—the growth is soft and diffuse and shows a tendency to grow larger on one side, usually the right. Although it sometimes recedes of its own accord, its tendency is to persist if the cause be not removed, and to undergo colloid, cystic, or other retrogressive changes. It is a pernicious form in the sense that in the child it tends toward the production of cretinism, and in the

adult, to the corresponding condition, myxedema. Now, it is here that a careful study of the general symptoms will reveal the true nature of the trouble, the symptoms being quite characteristic, and typically those of a mild form of hypothyroidism. The pulse is slow, ranging from 62 down to 40 or even lower. This bradycardia is witnessed in all cases. There is a marked tendency to hyperidrosis, especially of the extremities, excessive sweating occurring under slight exertion and sometimes even without it. Hypothermia is habitual, though seldom marked. The urea excretion is reduced one-third. There are no pressure phenomena, unless the growth is far advanced—no dyspnea, no dysphagia. Nor are there nervous symptoms, such as those that are common to hyperthyroidia and exophthalmic goiter—no tremor, no exophthalmos. Treated in time with thyroid gland and by removal of the cause, if the latter can be located, these cases recover with relative promptness.

Comparing this hyposecretion form with that due to excessive secretory activity, which we shall term *hypersecretion goiter,* we find none of the landmarks just described. Indeed, as soon as any appear other than the goitrous enlargement, they are clearly those of *larval exophthalmic goiter*—a somewhat rapid pulse, so-called "nervousness," with tremor so slight, perhaps, that it is revealed only on careful examination. As a rule, however, and in cases seen sufficiently early, there is simple enlargement of the gland without constitutional symptoms. Its shape is not modified at first, and for a time the swelling can only be discerned by palpation, and perhaps by careful inspection during deep respiration, deglutition, and coughing, which greatly accentuate the up and down motion of the gland. There are no symptoms due to pressure at this stage.

Returning to the hyposecretion goiter, it is the form which, as Kocher states, "is not usually brought to the surgeon for treatment because it can be cured by internal medication." It is the type known here as "parenchymatous goiter." This type, as Adami writes, "would seem to be an overgrowth of the gland with overactivity, although such overgrowth may eventually give rise to atrophy and inactivity of the specific glandular substance."

which means that it also may lead to cretinism in children and myxedema in adults. "It is very suggestive," continues the same author, "that in a large proportion of cases where the goiter is not of too long development and is of the parenchymatous type, the iodine treatment has for long years been found to give good results"—provided, let me add, that the source of intoxication is also removed.

The recognition of the connection of the thyroid—always including the parathyroids—with the defensive mechanism of the body, enables us also to get better results in the treatment of goiter by emphasizing the importance of endogenous intoxication in the causation of the disease. A patient may not do well, as is often the case, under iodine or thyroid gland, or both combined, the best plan,—even when given early, avoiding strictly all cases showing signs of Grave's disease, but this will soon change if, besides giving these agents, attention is paid to any condition whatsoever: intestinal, hepatic, gastric, renal, etc., capable of provoking auto-intoxication. Concomitant goiter and chlorosis are occasionally witnessed in young girls; the treatment of the coprostasis so common in them will sometimes alone cause the swollen thyroid to recede. Poor or carious teeth—possibly by hindering mastication—suppurative foci, briefly, any condition capable of producing systemic poisoning, including toxins and endotoxins, must be eliminated. In short, the successful treatment of goiter is not a mere question of thyroid and iodine. Intestinal antiseptics, the salicylates, creosote carbonate, menthol, etc., are also helpful, when intestinal functions have been regulated. This accountts for the success obtained by McCarrison with thymol, his belief being that a special micro-organism was the pathogenic factor in his patients.

The recognition of cases which are amenable to medical treatment is not difficult. Such treatment will prove effective, as a rule, when the gland is diffuse and elastic, *i. e.*, of the parenchymatous type, particularly in adolescents and young adults. In the nodular, cystic, colloid, fibrous, and intrathoracic forms, iodine is seldom of value and sometimes dangerous. I have seen a single drop of tincture of iodine cause marked toxic phenomena in

nodular goiter. Yet the fact that the line of demarcation between medical and surgical cases is not always clearly defined warrants a test of the medical treatment—while closely watching the patient—a step which sometimes yields unexpected favorable results.

Finally, recognition of the fact that we are dealing with a reaction of an organ having for its function to defend the body against poisoning seems to me to brand as a danger signal which the authorities of countries or districts in which goiter prevails should heed. They rightly quarantine sufferers of contagious diseases; but in many districts they supply water which is a menace to the health and mental development of thousands of children and adults. No water known to be capable of producing goitetr should be used by a community. Even the resource of boiling fails here, since it minimizes, but does not destroy, the pathogenic agent. Moreover, medical school inspectors should look upon an incipient goiter as evidence that the child or adolescent bearing it is being exposed to physical and mental decay through chronic poisoning, and strive to prevent it by calling attention to the need of immediate treatment on modern lines.—*Monthly Cyclopedia and Medical Journal.*

Extracts from Home and Foreign Journals.

SURGICAL

Suture of Wound of the Heart.

At a recent meeting of the Surgical Society of Paris Lenormant reported the case of a man who had received a gunshot wound on the right side of the chest to the outer side of the mammary line. On account of the smallness and rapidity of the pulse a diagnosis was made of a penetrating wound of the heart. The author resected the first costal cartilage, then the fourth and fifth costal cartilage on the right side, and the right of the sternum. The wound in the pericardium was discovered, the latter was opened and emptied of clots, and a wound in the right ventricle of the heart was sutured. No search was made for the bullet nor for the spot of its egress from the heart. There was a perforation of the lung, which did not bleed, and which was let alone. The operative wound was closed without drainage. The patient made a perfect recovery.—*Gazette des Hopitaux.*

Post-Operative Intestinal Stasis, Prophylaxis of.

Abrasion of the peritoneal surface of the gut is a most common and frequently unavoidable cause of post-operative intestinal stasis. The method of overcoming the effects of this traumatism by means of mineral oil, introduced within the abdominal cavity at operation, has proved effectual and safe. The dose used by the author was 6 ounces, the oil being sterilized, poured into the abdominal cavity, and sponged over the coils of intestine.

Experimental studies in guinea-pigs and dogs showed that bland, non-irritating oil, represented by purified liquid petrolatum obtained from Russian oil, causes none of the changes characteristic of adhesion formation, viz., endothelial cell injury, production of a coagulable exudate, agglutination, organization,

and finally scar production. The oil has no appreciable chemical action upon the tissues, nor a deleterious effect upon the animal, and is slowly absorbed. Used intra-abdominally in sufficient quantity it prevents to a great extent the formation or recurrence of adhesions. It fills the lymphatic channels leading from spaces denuded of peritoneum or opened by incision, thus limiting septic absorption, and, through preservation of the endothelial cells, prevents extension of peritonitis. Oil is used to advantage in place of salt solution, upon abdominal pads or gauze introduced into the abdominal cavity during operation, and, in exceptional cases, poured into the wound. It protects the abdominal contents from much injury and eliminates or minimizes post-operative vomiting, abdominal pain, and intestinal stasis.—*Monthly Cyclopedia and Medical Bulletin.*

Treatment of Syphilis.

Sweitzer, of Minneapolis, is right when he states that we treat syphilis for three reasons: First, because only a small percentage of untreated cases get well; second, to prevent others from acquiring it; third, from a sociological standpoint, to prevent late syphilis of the heart, blood vessels, brain and spinal cord. He speaks with a trifle too much enthusiasm of salvarsan, but insists that its use be supplemented with the well-known antisyphilitic drugs.

Here are his conclusions:

"1. Syphilis in the primary stage with a negative Wassermann can be aborted by intensive salvarsan and neosalvarsan and mercury treatment.

"2. Secondary syphilis is not cured by three or four salvarsan or neosalvarsan injections.

"3. Syphilis should not be treated with salvarsan alone. Mercury should be given in all cases and is best given hypodermatically.

"4. An early negative Wassermann is not indicative of cure

except in the abortive treatment of primary syphilis where the reaction was never positive.

"5. Necessity in secondary syphilis for several years intermittent treatment."—*Cincinnati Medical News.*

Stab Wound of Heart Injuring Left Verticle. Exhibition of Specimen.

Rodney Holmes, colored, age 21, brought to the hospital in ambulance, Monday night at 8:30. He had been stabbed just on line with the left nipple and two inches below it. Not more than fifteen minutes had elapsed since the wound had been inflicted. The knife had completely severed the seventh rib, and had also cut the inter-costal muscles between the sixth and seventh ribs for a distance of one and one-half inches. The patient was as near white as a negro can get from loss of blood; no pulse could be felt at wrist, and he was breathing with great difficulty.

When the temporary dressing of gauze was removed the base of the left lung could be seen protruding on each inspiration. On each inspiration blood would flow from the wound, showing that the thorax cavity was well filled with blood. Not waiting to move patient from the stretcher, I injected one-half of one per cent novocain, in order to enlarge the opening both inward and outward. At the same time, intravenous infusion was started, ten drops of adrenalin chlorid being added to the saline. Finding that I had not enough room to work in, I resected an inch and a half of the seventh rib towards the inner line. This I was easily able to do with a heavy scalpel. I then grasped the base of the lung, and immediately discovered a rent in it of at least three inches. I found thiis bleeding freely from three spurters. Catching these points with artery forceps, I lighted them, and brought the rent together with catgut sutures. I then explored cavity with two fingers, and at first could detect no opening in the pericardium. I evidently went below the opening. My conclusions then were that I had evidently stopped the hemorrhage, and that this, with the existing pneumothorax, was causing the patient's depression.

I was about to stop when I noticed a piece of tissue resembling the pericardium protruding in the wound. I grasped this with forceps, and was easily able to see the cut in the pericardium. I then resected two inches more of the seventh rib, and extended my incision more to the middle line, just up to the line of the internal mammary artery. I then grasped the cut edges of the pericardium, wound and then enlarged it a little toward the median line. This enabled me to see a fairly well-organized clot in the pericardial cavity. The wound in the heart could be easily seen at apex, extending into the left ventricle and running behind the apex, and, whenever the heart muscle would contract, a stream of blood would fairly shoot out, filling the pericardium cavity.

It still remains a mystery to me how he was able to live this long. My own conclusion is that the clot I had dislodged was acting as a plug, and for that reason he was not bleeding so freely. It was a question of a few minutes to grasp the cut edges of the heart wound, and introduce seven silk sutures. These I placed as deep in the muscular structure as I could. The victim, up to that time, had been conscious. The infusion had bolstered him up, but the active bleeding at time of the suturing was too much.

I then put a large pack in the pericardial cavity and stopped all manipulation. He breathed for about five minutes, his heart still beating. Another pint of saline was introduced in vent, and I injected fifteen drops of adrenalin directly into heart muscle.

Artificial respiration was kept up, but to no avail. It is a noteworthy fact that his heart beat faintly for ten minutes longer.—*New Orleans Medical and Surgical Journal.*

Operation for Fixation of Movable Kidney.

An oblique incision is made by Patterson below and parallel with the last rib, the muscles being carefully divided so as not to injure the last dorsal nerve. When the kidney is reached the perinephric fat is removed, so that the organ when in position lies in contact with the muscles. The renal capsule is next split from end to end along the convex border, and then stripped for about

half its extent from the anterior and posterior surfaces of the kidney. The upper three-fourths of these two flaps of capsule are now folded back over the part of the capsule which has been left adherent, and are retained in that position by a few stitches passing from the free edge of the flaps to the adherent capsule near the hilus, care being taken not to injure the pelvis. These stitches prevent the flaps from slipping back over the denuded renal surface. Three fixation stitches of strong catgut are next passed from within outward, about half an inch from the edge, then over the edge and once more through the flap from within outward. By this means the part of the capsule in the grip of the stitch is twisted and puckered, and the tendency for the stitch to cut out is diminished. These stitches are not tied in the meantime. The kidney is now pushed back into its normal position, care being taken to place the upper pole behind the liver. If attention should not be paid to this point, especially in cases in which the kidney tissues are very lax, it may push the peritoneum in front of it and take up a horizontal position at the under surface of the liver. One end of each of the three fixation stitches is now passed through the muscles and fascia forming the upper margin of the wound, near its posterior angle, and tied as they are passed. The kidney now lies well under cover of the ribs, with its lower pole on a level with the upper margin of the wound. The cavity under the kidney is packed with gauze and a dressing applied. This packing is left undisturbed for six or seven days, but subsequently it is renewed every two or three days till the wound has closed. The gauze gives temporary support to the kidney and relieves the strain on the fixation stitches.—*The Journal of the American Medical Association.*

MEDICAL

On Shoulder Pain in Pleurisy.

Gerhardt states that but little attention has even been paid to this symptom, while the abdominal pain from the same affection has been freely studied. The author, after commenting on Mac-

kensie's finds, gives his own experience. He has seen isolated shoulder pains in four cases. Two were examples of lower lobe pneumonia with pleural irritation, a third of chronic dry pleurisy, while the fourth was dry pleurisy following infarct in a lower lobe. All the patients complained also of diaphragmatic pains. In three of the four cases pressure over the phrenic nerve was felt distinctly. The shoulder pain was felt most acutely in the parts which lie laterally and to the rear of the joint. The skin over these portions was sensitive to pressure. Movement increased the shoulder pains, and in two cases the first diagnosis was rheumatic arthritis. In all four cases there was a pleuritic friction sound over the deepest portion of the lower lobe. The material illustrates the sympathy between the shoulder joint and the lower lobe of the lung. This also leads to the relation of the lower lobes and the diaphragm and to the participation of the phrenic nerve. In diaphragmatic pleurisy, pain in the neck and shoulder sometimes occurs. It thus seems reasonable to connect isolated shoulder pain with diaphragmatic pleurisy, by means of the sensory fibers of the phrenic. A similar explanation might hold true for the visceral abdominal pains of pleurisy. An alleged acute rheumatic arthritis in the shoulder should naturally suggest the necessity of excluding pleurisy.—*Medical Record.*

Bacillus Lactis Bulgaricus in Infantile Gastroenteritis.

The remarkable results obtained by Clock in the vomiting and diarrhea of babies by the administration of the *Bacillus lactis bulgaricus* in tablet form led me to try the treatment in a series of cases that came under my care during the months of July and August of 1913. There were fifty-five cases in all. The home conditions of these infants were for the most part wretched, as over ninety per cent of the parents were very poor, ignorant and superstitious. The cases varied in severity from moderate degrees of infection—six stools a day, to the most grave—twenty and more passages in twenty-four hours. In a few of the babies the stools were blood-stained at the time treatment was begun. The diarrheas had been present anywhere from one day up to a

month or more. From three to ten lactic bacillary tablets a day were given to each baby, depending on the gravity of the illness.

Of the fifty-five cases treated, sixteen were breast babies, thirty-two bottle, and seven breast and bottle. The babies ranged in age from a few weeks up to two years; twenty-two were under six months; twenty-five, between six and and twelve; and eight between twelve and twenty-four months. Forty-seven were in the first year of life. In thirty-three children there was diarrhea but no vomiting; in twenty there were both vomiting and diarrhea; and vomiting alone was present alone in two cases. The stools were generally green, watery or curdy, foul, slimy and in a few blood-stained. A temperature over 99° F. was present in twenty cases. Some had a fever as high as 105° F. Some of the patients received no treatment other than the tablets; no starvation, no purgation and no other medicine. Seventeen cases received an initial purge of calomel and castor oil and were kept on barley water alone for twenty-four hours or less. As a matter of fact, very few of the mothers of these infants actually kept the babies of milk even for this short period of time. Saline irrigations were used in twenty-seven of the fifty-five cases and bismuth in small doses administered along with the tablets in thirteen cases. The reason for this will be given further on.

The results obtained were as follows: Forty-three of the children gained in weight outright; two lost; three gained and then later lost, and in seven there was no change of weight recorded. Of the forty-three whose weight increased, twenty-three started with a loss. The babies were weighed once each week, whenever possible. There were no deaths. In all cases, the temperature came down to the normal within one to three days, except in a few, where there was an associated condition such as a bronchopneumonia. Within two or three days after the tablets were used, the stools became yellowish or brown, well-formed, free from curds, mucus, and blood. The number of stools sometimes decreased and sometimes remained unchanged. To the latter children, bismuth subnitrate in tablet form was given in addition to the lactic bacillary tablets with very marked decrease in the fre-

quency of the passages. The tablets seemed to have but slight influence on the vomiting.

While it is not advisable to draw broad general conclusions from so small a number of cases, treated as these were under very trying and unsatisfactory conditions, nevertheless it seems that the administration of the *Bacillus lactis bulgaricus* is a distinct advance in the therapeutics of gastroenteritis of infants.—*Medical Record.*

Breakfast and Brainwork.

In an editorial article in the *Lancet,* September 27, 1913, it is pointed out that, as the evidence of some literary men proves, there is no time of day more fitted for the production of intellectual or imaginative work than the early morning hours. A little fresh-air exercise to start the day, following the habit of some athletes in training, is a thing that many a professional or business man might cultivate with advantage, but his breakfast should often be lighter than that of the average individual. There is a great deal to be said in favor of the coffee and rolls" plan, and for men whose days is spent in work which taxes the brain and nervous system generally more than the muscle, the wise course is to relegate anything approaching a hearty meal to the period of relaxation, the evening. But that part of the continental system which involves the eating of a heavy lunch is as objectionable as the heavy breakfast plan. It can be excused only if adequate time is given after the meal for digestion thereof, and most professional and business men can not spare the hour's ease which should follow a hearty midday meal. In most European cities where the midday meal is a heavy one an hour or so is commonly spent in smoking and chatting afterward. This leisurely proceeding, however, is not possible with the more strenuous business habits of England and America, as the "quick lunch" institution testifies. Nor need the quick lunch be severely deprecated if the quantity of food ingested is reduced in accordance with the time taken for its consumption. If the quick luncher is also a heavy luncher then he combines the evil properties of

both the continental and English methods, and will, doubtless, incur the punishment of the dyspepsia which his habits invite. But if the meals during the day be light the writer does not believe that the worker need be asked to forego either breakfast or lunch.—*Medical Record.*

OBSTETRICAL

Choice of Operations for Retroversion When the Abdominal Cavity Is Opened.

Dr. Henry T. Byford of Chicago stated that Alexander's operation utilized the round ligaments in a natural way by drawing toward the inguinal ring, so the intraperitoneal shortening should draw in the same direction. It should also preserve the normal uterine attachment and best part of the ligament. It should not change the relation of the uterus to its surroundings. The relief should be permanent and not nullified by post-operative complications. There were certain objectionable features that should be avoided, namely, dependence upon peritoneal adhesions, for they were unreliable; the production of exudates, for they interfered with normal mobility and were apt to produce symptoms; the leaving of exposed sutures in the peritoneal cavity, for they gave rise to exudates and adhesions; the suturing of the uterine body in any way, for it frequently interfered with normal function traction in an upward direction, for it should, as far as possible, be downward upon the filling and emptying bladder. The steps of the operation were as follows: The ligiament was grasped near its exit from the internal inguinal ring and pulled toward the median line until it was taut. A slender 20-day catgut thread was passed through it about a centimeter from the internal inguinal ring and again about five centimeters from its uterine attachment, and tied. The edges of the resulting loop of the ligament were sewed so that it would form a double cord, and leave the end of the thread projecting beyond its free end. Then separate the peritoneum freely from the abdominal wall at the lower

end of the incision laterally as far as the internal inguinal ring. With the point of a pair of slightly curved hemostatic forceps puncture the peritoneum from without inward about a centimeter mesially from the ring, grasp the thread and pull the loop through the puncture until all of the sutures are extraperitoneal. With a permanent suture the loop is attached at a point about a centimeter from its base to the inner surface of the abdominal wall as near the inner ring and as low down as possible without risk of puncturing the epigastric or femoral artery. The pulsating arteries are easily felt, and each step of the operation should be guided both by sight and touch. Twist the loop half way around on its long axis and sew it with catgut along the abdominal wall toward the median line. The same is done on the opposite side with the other ligament and the abdomen closed. A small pessary should be introduced to be worn for about three months. When the operation is done in this way the sutures are all extraperitoneal, the intraperitoneal relation of parts is practically normal, and the traction of the ligament is toward the internal inguinal ring.—*Medical Record.*

Pituitary Extract in Puerperal Eclampsia.

Report of two cases of puerperal eclampsia in which the use of pituitary extract was followed by successful results. Case I was aged 42; V-para; the seizures began at 1 a.m. When seen the patient was comatose and cyanotic. The urine showed albumin, 5 per cent. There was sodium chloride retention. The patient received 1.19 c.c. of hypophysis extract and 0.02 gm. of pantopon. The convulsions, which had been continuous from the first, ceased within a half-hour. At 4 p. m. she became conscious, and the os was found to admit a finger. A second injection of hypophysis extract was then given. At 6 p. m. a healthy child was expelled, and the placenta followed in five minutes. The mother completely recovered, but showed a trace of albumin in the urine for months.

Case II was aged 23: II-para. She was in the sixth month of gestation. Convulsions set in at 11 p. m. She became uncon-

scious and attacks of convulsions were incessant. The face was swollen and the legs edematous. Pulse 140, small. Anuria. The os was closed. Digitalis and diuretin given by mouth were vomited. Pituitary extract and pantopon were injected in same quantities as in first case, and the convulsions ceased within three-fourths of an hour. At 2 p. m. the os admitted a finger. Diuresis reappeared, the urine containing an abundance of albumin. A second injection of pituitary extract was given. At 4 a.m. a six months' fetus was expelled alive, the placenta immediately following. The fetus survived fifteen minutes. The patient recovered fully in eight days, and the last traces of albumin disappeared in four weeks.—*Monthly Cyclopedia and Medical Bulletin.*

Appearance of Menstruation During the Climateric.

Levy has recently witnessed a case of this sort which he pronounces extremely rare. His title "appearance of menstruation" should really be reappearance, etc. The woman was born in 1836, and menstruated when 16. At 22 she married and presented the world with 14 children, all breastfed and all born at full term, and from 18 months to 2 years apart. She had never aborted, and in fact, had had no illnesses whatever. Periods always regular, lasting 6 days. At the age of 57 the menses ceased but without symptoms of climacteric. At 71 the menses reappeared, and regularly until nearly 76. She is now 78 and hale and hearty.—*Medical Record.*

Editorial

PUBLISHER'S NOTICE—The Journal is published in monthly numbers of 48 pages at $1.00 a year, to be always paid in advance.

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All communications for the Journal, books for review, exchanges, etc., should be addressed to the Editor.

THE MENTAL NOSTRUM.

A marked copy of the "Monitor," a Christian Science daily, has just come to hand. The marked article is entitled, in large type, "Tuberculosis Not Infectious." In this article an editorial of the Journal of the American Medical Association is basely misquoted and all qualifying statements which would weaken the editorial from the Christian Science viewpoint are omitted to such an extent that one could never identify the original and the quotation as having any relationship.

How the editor of any magazine or paper, much less a religious paper, can stoop so low is almost beyond comprehension.

Religious fanaticism, which like any other fanaticism is a form of insanity, alone can account for such an act and it is high time that religious fanatics and other fanatics be controlled in their actions if such actions can be shown to be injurious to the great mass of people.

Christian Science is to Medical Science what quack medicine is to real medicine, in that its advocates claim it is a panacea for all ills that man is heir to. In fact few nostrums claim so much. Every practitioner believes in using psychology in certain selected cases, and if properly used results are obtained which with medicine alone would be impossible, but he can also in certain cases get results with quack medicine. However, psychotherapy as well as quack medicine is far reaching in evil results if ignorantly

used. Yet Christian Scientists daily use psychotherapy ignorantly and its own advocates or those dear to them are the sufferers thereby. Were the circulation of the above named article confined to physicians its power for evil would be small, but it makes one shudder to think of the harm it carries, the barriers against the Great White Plague it may weaken, if the desires of the muddler of the original article are realized.

The Leper Hospital, Jerusalem.

It was the writer's privilege on a recent visit to Jerusalem to be allowed the privilege of a visit to this interesting institution. The asylum is termed "Jesus Hilfe," and is conducted by the Moravian sisters. At the close of the year 1912 there were 45 lepers in the hospital, of which 32 were men and 13 women. Thirty-eight were Mohammedan and 7 Christians. The sisters were very much pleased over two donations during the past year. One was for 1200 francs, and was brought by a Franciscan monk from Jerusalem, given by a donor who wished to remain unknown. This is the first donation from a Roman Catholic source, though the hospital gives many Roman Catholic lepers a home. The other donation, which caused special pleasure, was one of 201 marks, sent by Esquimos in Alaska. The asylum is nicely situated in the German colony within walking distance of Jerusalem. It consists of a spacious, comfortable and airy building and on a farm which contains garden, fruit trees and live stock. This farm is run by the inmates of the asylum and affords them employment and amusement. The cases of leprosy which I saw there were not as bad as I had pictured them in my mind's eye. The most of them were able to be out and about, in fact the most of them at the time of my visit were out employed at work about the farm. Many had suffered the loss of toes and fingers and some of larger limbs. The disease does not seem dangerously contagious with proper care. The sisters told me that not one case of contagion had occurred in the hospital and some of the

sisters had been there many years. They are certainly doing a good, great and noble work among these poor outcasts.—*E. S. McK.*

Medical Missionaries.

It was Rudyard Kipling who spoke of medical missionaries and common missionaries. We wish to speak well of medical missionaries. All through Palestine, Egypt and Syria we found noble medical missionaries who had been hard at work at their posts for ten, twenty, thirty years. I well remember coming into Tiberius one night, a town on the Sea of Galilee, six hundred feet below the level of the Mediterranean. I asked the hotel keeper if there was a medical man in town. He referred me to Dr. Torrence. I found him at home looking happy with his three children, third wife and third mother-in-law sitting about him. He was a Scotch Doctor and had been 29 years "on the job" at that particular post. He had a native assistant, a small hospital, several nurses and as many patients as he could handle. He entertained us kindly and the next day he and his American wife accompanied us over to Nazareth and spent two days showing us the country. The doctor could do this, for he had walked, ridden and driven over almost every bit of it many a time, day and night. It was touching to see the devotion of the people of that section to their doctor. At Nabulus, ancient Sechem, a fanatical Mohammedan town where it is not safe for a Christian to go out alone, I found Dr. Clark, working away where he had been since he and I were students together at St. Bartholomews at London in 1881. At Assiut, up the Nile, I found my old friend and schoolmate, Dr. L. M. Henry, who is doing noble work and has been there for 22 years. He had some interesting pioneer experiences in Egypt when he used to count himself fortunate if he found a bag of onions to sleep on, onions and bedbugs being incompatible. He commenced on foot, then rode a donkey, a horse, a carriage and now an automobile. There are many others like these.—*E. S. McK.*

Schools of Medicine in Arabic Countries.

It has been the writer's pleasure and surprise to see three very good schools of medicine. One of these was at Scutari, across the Bosphorus from Constantinople. It is a fine building and in spite of its Turkish management seems to be very thorough and complete. Another is the Medical Department of the Syrian Protestant College at Beirut which is a well known American institution with a well earned reputation. The third is the School of Medicine at Cairo. This is under the Egyptian government largely taught by British Medical men and is very thorough indeed. It is conducted exclusively for the Egyptian students and will only take a limited number of those, that is, as many as they can accommodate and teach properly. There is a great work for these three schools, all of these countries sadly needing carefully trained native medical men to supply the needs of the people. It is well that the native doctors can get their training at home, where it must be much cheaper and can be made as thorough. I wish to add here a word of commendation for the medical missionaries of Syria and Egypt, some of whom I have seen and visited at their labors. I found some among them my former schoolmates, others my former pupils. They were all doing good work. Ten, twenty, thirty years they have been working away at their lonely posts. It is beautiful to go about with them and to see the loyal devotion of the people to them. Surely this ought in some measure to repay them for their years of hard work, solitude and deprivation.—*E. S. McK.*

United States Civil Service Examination.
Medical Assistant (Male), January 12, 1914.

The United States Civil Service Commission announces an open competitive examination for medical assistant, for men only. From the register of eligibles resulting from this examination will be made to fill a vacancy in this position in the Bureau of

Chemistry, Department of Agriculture, Washington, D. C., at $1800 a year, and vacancies as they may occur in positions requiring similar qualifications, unless it is found to be in the interest of the service to fill any vacancy by reinstatement, transfer, or promotion.

The duties of this position will be to study the claims and representations made in conjunction with proprietary remedies, look up medical literature, assist in preparing cases, etc., under the Food and Drugs Act. A knowledge of French and German is desirable.

Competitors will not be assembled for examination, but will be rated on the following subjects, which will have the relative weights indicated.

Subjects	Weights
1. General education and medical training	35
2. Practical or professional experience and fitness	45
3. Publications or thesis	20
Total	100

Graduation from a medical school of recognized standing and at least three years' subsequent experience in the practice of medicine, or two years' subsequent experience in either pharmacological investigations or the actual examination of drug products with reference to the claims made therefor by manufacturers, are prequisities for consideration for this position.

If a thesis is submitted under subject 3 it must present the results of original investigational work on the part of the applicant in some phase of medicine or pharmacology.

Statements as to training, experience, and fitness are accepted subject to verification.

Applicants must have reached their twenty-fifth but not their forty-fifth birthday on the date of the examination.

Under an act of Congress applicants for this examination must have been actually domiciled in the State or Territory in which

they reside for at least one year previous to the date of the examination.

This examination is open to all men who are citizens of the United States and who meet the requirements.

Persons who meet the requirements and desire this examination should at once apply for application Form 304, and special form, to the United States Civil Service Commission, Washington, D. C.; the Secretary of the United States Civil Service Board, Post-Office, Boston, Mass., Philadelphia, Pa., Atlanta, Ga., Cincinnati, Ohio, Chicago, Ill., St. Paul, Minn., Seattle, Wash., San Francisco, Cal.; Customhouse, New York, N. Y., New Orleans, La., Honolulu, Hawaii; Old Customhouse, St. Louis, Mo.; or to the Chairman of the Porto Rican Civil Service Commission, San Juan, P. R. No application will be accepted unless properly executed and filed, in complete form, with the Commission at Washington prior to the hour of closing business on January 12, 1914. In applying for this examination the exact title as given at the head of this announcement should be used.

Issued December 8, 1913.

Obituary.

Died in this city, aged 64, after several years of sickness, Dr. W. G. Ewing, for a long time successful practitioner in Nashville and vicinity. In his early manhood he graduated in pharmacy from a college in Philadelphia and on his return to this city was for several years engaged in prescription work in one of the largest drug stores in the city. After attending two courses in the medical department of Vanderbilt University he graduated from that department in 1877. He at once entered upon a large and lucrative practice which he maintained up to a few years before his death, when he retired from active practice on account of failing health.

Soon after graduation he became professor of Materia Medica in his alma mater and later on was made dean of the faculty, transacting for years the immense business entailed upon that office to the entire satisfaction of the student body with whom he came in intimate relations and his *confreres* of the faculty. On the dissolution of the medical department of the University of Nashville he was elected to a chair in Vanderbilt University which his poor health prevented him from filling.

Dr. Ewing was an earnest, skilful practitioner and with many families in which he practiced his name was a household word. Courteous, affable and dignified he was universally respected by his fellow practitioners. A painstaking teacher, he was admired and beloved by students who sat to his lectures.

Fearless and true to his convictions, he was tenacious of his opinions and outspoken in his sentiments. As a man, as a physician and as a citizen, he was an examplar, and he will long be remembered by those who knew him as an ornament to the profession of which he was a member. May his reward in the next world be commensurate with the good he did in this!

To Libraries, Editors, and Others.

The large edition of the volume containing the Report of the Chicago Vice Commission (1911) was exhausted before many of the libraries and others could secure copies.

This Association, therefore, published another edition with the understanding that the book was not to be sold for profit through the booksellers.

The Reports of the Vice Commission of Philadelphia and Syracuse are of great additional value, affording opportunity for comparative study of the great social problem.

The cost of the Chicago Report, cloth bound, is 50 cents, postage 12 cents additional.

Report of the Social Evil, Syracuse, N. Y., 40 cents, including postage.

Report of the Vice Commission of Philadelphia, 40 cents, including postage.

We will send all these on receipt of $1.25, or separately at prices named. Address,

American Vigilance Association,

1632 McCormick Bldg., Chicago, Ill.

Reviews and Book Notices

Department of Commerce, Bureau of the Census, Wm. J. Harris, Director. Mortality Statistics. 1911-1912. Twelfth and Thirteenth Annual Report. Prepared Undeer the Supervision of Cressy L. Wilbur, M.D., Chief Statistician for Vital Statistics. Washington. Government Printing Office. 1913.

Our thanks are due the Government for these two volumes of reports prepared under the supervision of Cressy L. Wilbur, M.D., Chief Statistician for Vital Statistics. The carefully compiled statistics of death and birth rates in the United States furnish valuable sources of reference for all questions bearing upon these important subjects. The importance of such statistics in tangible form is unquestioned.

Betterment of Life Insurance Service. Proceedings of the Seventh Annual Meeting of The Association of Life Insurance Presidents. Held in the Hotel Astor, New York, N. Y., December 11 and 12, 1913.

This report of proceedings of the Association of Life Insurance Presidents should prove of interest to all whose good fortune it is to have a copy. The matters discussed are those relating to vital questions involving life insurance. Two papers of especial note are those of Dr. Rupert Blue, Surgeon General, U. S. Public Service, and of Hon. Wm. H. Taft, Ex-President of the United States.

Section VII.—Care of Out-Patients. Report on Inquiry into the Departments of Health, Charities, and Bellevue and Allied Hospitals in the City of New York, Appointed by the Board of Estimate and Apportionment. George McAneny, Chairman, President of the Borough of Manhattan; George Cromwell, President of the Borough of Richmond; Investigation and Report Under the Direction of Henry C. Wright, City of New York, 1913.

This is a series of reports of a committee appointed for the purpose of inquiring into the affairs of the various hospitals and charitable institutions of the city of New York.

Section IV treats of "Ratio of Nurses to Patients proposed for Municipal Hospitals." Section V, of "Children's Services in the Municipal General Hospitals in Manhattan and the Bronx."

Section VII, of—

"1. The Out-patient Department of Government Hospital."

"2. Suggestion for the Organization of a Public Out-patient Department."

"3. "Sickness in the Home and Proposed Health Center."

Section VIII—

"1. Hospital Helpers."

"2. Proposed Salary and Wage Schedule for the Department of Public Charities."

This series of reports should prove of great value to all interested in the conduct of hospitals and charitable institutions.

Publisher's Department

Utero-Vaginal Catarrh.

In Catarrhal Conditions of the Utero-Vaginal tract there is ordinarily a congestion of the local capillary circulation followed by an exudation into the surrounding tissues, then a further exudation by the mucous membrane.

To check the secretions by means of caustic or astringent applications is to aggravate the trouble and delay resolution.

To deplete the engorged tissues, accelerate the capillary circulation and purge the mucous membrane, is to restore to normal conditions and allay inflammation. To effect just these results is preëmiinently the province of Glyco-Thymoline.

In cases of Endometritis, a hot douche (110°) of a 10 per cent solution followed by an application of an ounce or two full strength to be retained by elevating the hips with a pillow, will work wonders in ameliorating the condition.

"Elixir Saloform Comp., Flexner." Contains 20 per cent alcohol. An efficient remedy for rheumatism, gout, cystitis and uric acid solvent. Prepared for physicians' prescriptions only. Robinson-Pettet Co., incorporated. (See advertisement in this issue.)

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CHARLES S. BRIGGS, A. M., M. D., Editor

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Proceedings of Societies

"The Medical Treatment of Exophthalmic Goitre."*—By David Bovaird, Jr., M.D., Assistant Professor of Clinical Medicine, College of Physicians and Surgeons, New York.

The treatment of exophthalmic goitre, just as the treatment of any disease, will be influenced, to a greater or less extent, by the theories held as to the causation of the symptoms of that disease. The pathology of exophthalmic goitre is very indefinite. The symptoms of the disease may be found with such a variety of lesions of the thyroid that one can not put his finger on any one and say that this is the cause. We also find that in the study of the pathology of the disease, men are driven to seek for some explanation outside of the thyroid itself. It is generally conceded that the phenomena of exophthalmic goitre are for the most part produced by the excessive function of the gland. This is generally accepted, but the problem is: What causes the excessive function of the thyroid? Is the cause in the thyroid itself or in some more or less distant organ of the body, or in the nervous condition of the patient? Then, going further back, men are more and more raising questions as to the inter-relation of the several internal glands of secretion of the body, and are suggesting how one and now another inter-action;—that it is not

*Read by invitation before the Clinical Society of the New York Post-Graduate Medical School and Hospital, December 19, 1913.

the thyroid, but the thymus, or the adrenals, or the hypophysis, or everything put together which results in the phenomena of Basedow's disease; and before you have finished you are in the borderland of "Weiss nicht wo" and don't know exactly what are the facts or what any particular fact means. After studying all the theories and explanations, the man who has much practical experience in handling cases of exophthalmic goitre must ask himself what are the conceptions of the disease that are really helpful in the treatment?

They are two: (1) The symptoms of exophthalmic goitre are, in the main, produced by the excessive function of the thyroid gland. (2) These patients are of distinctly unstable nervous equilibrium (there is an excessive action of the nervous system). Now whether this be the fundamental basis or the result does not matter much. We know that the nervous equilibrium is very unstable, and these patients represent a type of excessive nerve irritability. Our treatment therefore can not be directed to a specific cause, as we do not know the cause; it must be in the main symptomatic, and it is often purely empirical.

It is necessary at this time to say a word in behalf of medical treatment. The successes of surgery are so brilliant that many of us are inclined to think that we must look to surgery in cases where we should be more conservative. The tendency at the present time is to operate upon too many cases of exophthalmic goitre. When one comes to look into this matter, he finds that there is some very interesting information to be had upon this point. Forcheimer has advocated the medical treatment of goitre, and reports having treated seventy-six cases with almost uniform success, and not a death in the series. The only death he had seen resulted from thyroid feeding.

In like manner, Jackson and Mead treated a series of eighty-five cases with but three deaths (only one under their own care). Baker reports a series of fifty cases, of which forty-four were alive eight years from the first record. Of the six deaths, none occurred from exophthalmic goitre or any of its complications.

On the other hand, when we examine the mortality of exophthalmic goitre from surgical and other methods of treatment, we

find that Sattler from the literature estimates it as about seven per cent; Kocher gives twenty-two per cent; and other estimates vary between twelve and twenty-five per cent; and in severe types Mackenzie says thirty per cent. It is almost impossible to compare the different series of statistics, as the results depend so largely upon the material and conditions under which one works, whether private or public—Forcheimer's seventy-six cases were private patients. The milder cases such as Jackson and Mead speak of, were dispensary patients. The severer cases only just come to the hands of the surgeon and furnish the results stated; but these figures are quoted merely to show that large numbers of cases of exophthalmic goitre may be treated by purely medical measures with substantial success, and that there are clinicians of wide observation, like Forcheimer, who call very little upon the surgeon. Forcheimer's patients were largely private patients in whom the diagnosis was presumably made at an early stage, and successful treatment depends largely upon early recognition of the condition, before the eyes are bulging from the head. He recognized the cases in the early stage, and by treating them accordingly he got very satisfactory results. From the practical standpoint, that is what we want to do—to recognize the condition in its early stages and not to wait until the patient is almost *in extremis* before attempting to stop the progress of the disease.

Now there is what may fairly be called a medical treatment of exophthalmic goitre, and for the most part it is so simple that after I had agreed to come and talk to you about it and began to think what I should say, it seemed to me that I should find difficulty in saying anything of interest. In many of our therapeutic efforts we make the mistake of trying to be too wise and we do not give attention to the simple things that count most. In the medical treatment of exophthalmic goitre, the first thing that appears to be important is rest. This does not mean that every patient must go to bed and stay there. The treatment must vary with the individual and the severity of the symptoms. If you watch these patients you will find that fatigue will tell severely upon them. Everyone of them will react more or less to

properly applied rest—in ambulant cases, the relief of excessive physical or mental activity; in other cases absolute rest in bed, with the avoidance of all forms of activity. But the principle is the same. To my mind this is one of the most important considerations in the treatment of this disease. As improvement occurs, activity is to be gradually and very carefully resumed. Just as fatigue will produce the disease, it may bring it back in the stage of convalescence or recovery.

Next, one speaks of the diet of these patients. For many years we have sought specific diets for different conditions, and many of us have spent weary hours in studying diet lists in various books for gout, rheumatism, or other diseases. We have found that there is no specific diet for exophthalmic goitre, but the same principles apply to the alimentary tract as to the remainder of the body. We aim to feed the patient to the utmost with the least tax on the digestive system. There is first of all an excessive nitrogenous excretion depending upon excessive protein destruction, for which we would naturally infer that we should feed these patients with nitrogen in large quantities; but we find that that is the most effective diet to stir up the activity of the gland, so that meat is advised against. We must aim to nourish our patients by the carbohydrates and fats, and by frequent feedings of small quantities, using also eggs and milk. We must aim to meet the more or less rapid emaciation that marks the disease, and if we can stop the downward progress of the patient and get even a slight increase of weight we feel confident that we are accomplishing something to the advantage of the patient.

In the next place hydrotherapy is of distinct benefit. The exact form in which it is used must depend upon the patient. Most of them react well to baths—neither extremely warm nor extremely cool, but of moderate temperature. Such baths usually have an effect on the patient of quieting the nervous symptoms, enabling them to sleep better and restoring a more normal tone. In conditions of excessive excitement of the thyroid, ice bags applied to the neck and an ice cap over the heart have been found to be effective measures in controlling to some extent the activity

of the gland and mitigating the severity of the symptoms. Some of these patients have been strikingly benefitted by the ice cap over the heart, and have actually demanded and endured it for long periods when one would have thought they would have become exceedingly tired of such treatment.

The Nauheim treatment has been strongly recommended by some and strongly condemned by others. In conditions of myocardial insufficiency the Nauheim baths may be valuable; in pure exophthalmic goitre, they would not seem to be of any special use.

One finds constant reference in the literature to change of climate in exophthalmic goitre, and yet no one can tell exactly to what climate or conditions any one patient should be sent. It is much like the climatic treatment of asthma. No one can tell dogmatically what climate will be good for any individual patient. Some cases of exophthalmic goitre improve under a change to the seashore or a mild climate; others recover in the mountains; but it is generally accepted that a change may work to the advantage of the patient.

Now, to come to the strictly medicinal treatment of the disease. In the first place, it seems to be desirable to increase the elimination as much as possible by attention to the condition of the bowels and increasing the excretion of urine by the free use of water. Thompson has advocated intestinal antisepsis in the treatment of exophthalmic goitre. I have not been able to convince myself of the value of that, but there is evidence that free elimination is of advantage. As a rule, it is best accomplished by the administration of sodium phosphate—one or two drams in the morning—sufficient to secure free action of the bowel day by day. Colon irrigations may be used with advantage in appropriate cases.

Bromide of soda or other bromides are of value to these patients—simply to allay the nerve irritability and secure to them some of the physical rest that we desire for them—secure them more sleep and more rest throughout the day. We push the bromides to the point of tolerance and continue them just as long as possible.

Then, there is a medicinal treatment of exophthalmic goitre

recommended by Forcheimer in his work on "Therapeusis of Internal Diseases." He reports his results with the use of ergotin combined with quinine hydrobromate, 5 grains of quinine, 1 grain of ergotin given three or four times a day, or they may be given separately. He was led to use the quinine in these cases by noting its favorable action on an individual patient and the fact that Jesuit's bark had long been advocated in the treatment of goitre; the ergotin was used on the theory of its influence on the size of the blood vessels. Any one of us who knows anything of the influence of medicine knows that the use of either of these medicines in exophthalmic goitre is largely empirical—we can not say that either one, or both, is particularly indicated in the disease, yet Forcheimer reports a series of 71 cases treated in this way with over 80 per cent of success. My experience has not been wide enough to warrant me in drawing any conclusions, except that it seems to be worth while. Certainly some patients so treated improve so promptly and so decidedly as to convince me that this treatment has some value. It may be continued indefinitely. It may be necessary to reduce the dose of quinine—although as Forcheimer points out, he had figured out the combination of quinine and bromide with the idea that the bromide would to some extent control the symptoms of cinchonism. Some cases will not stand fifteen or twenty grains a day of quinine—but it can usually be continued for months or years without harm to the patient, and with apparent definite benefit.

The use of quinine and ergotin has been tried out by such good clinicians as Shattuck, and Mead and Jackson, so one can not but feel that there may be a distinct value in these remedies. It is needless to go over the other remedies that are commonly employed in this disease. Digitalis and strophanthus are often recommended on account of the tachycardia. Under ordinary conditions they accomplish nothing, and they may be distinctly harmful, in definite cases of myocardial insufficiency, one may be justified in giving one or the other, but in ordinary circumstances it is well to avoid their use in this disease.

Dr. Hillman made reference in his paper to the iodin-content of the thyroid. The relation of iodin to the function of the thy-

roid glands is well-known. It must be given with very great care in this disease if given at all. It is certainly capable of aggravating the symptoms of the disease.

It seems therefore that there is a distinctly medical treatment of exophthalmic goitre which has its place, sometimes as a preliminary and regularly as a sequel to surgery, and which in a great majority of the cases that come under your observation as private practitioners will be sufficient in itself.—*February No. Post-Graduate.*

Selected Articles

THE NEED OF INDIVIDUALIZATION IN OBSTETRICS.*

By Franklin S. Newell, M.D., Boston, Mass.

One of the grave reproaches under which the medical profession rests today is that, although marked progress is being made in most branches of medicine and surgery, little or no advance is being made in the art of obstetrics, except by a small group of men. The great majority of the medical profession seem to believe that since childbearing is a natural function a physician needs no special training to fit him to practice obstetrics, since nature can be trusted to safeguard the parturient woman, except in the event of rare and unpreventable complications. It is not at all uncommon to hear a man, well equipped in some other branch of medicine, scoff at the idea that any special preparation is necessary for the proper practice of obstetrics, and yet we not uncommonly hear soon afterwards that this same practitioner has hard luck in one or more obstetric cases, and has lost either mother or baby or both. This so-called hard luck is definite evidence that his knowledge and skill were inadequate to the demands made on them in the particular instance, and in the majority of such cases a more thorough knowledge of the obstetric art, combined with a more careful study of the needs of his patient would have led to a favorable outcome. This indifference to the needs of the patient is undoubtedly due to the fact that child-bearing is a natural physiological function in normal women, and the infallibility of nature's method has been so deeply impressed on the minds of the majority of the profession that they can not see the possibility of any advantage accruing to the patient from any departure of nature's method. Furthermore, they

*Read at the annual meeting of the Medical Society of the State of New York, at Rochester, April 30, 1913.

do not realize that a considerable proportion of the women in every civilized community have ceased to be normal, and that the bad results are due to a lack of appreciation of the conditions present and are not unavoidable accidents.

We must admit, however, that certain bad results are unavoidable. Pulmonary embolus may occur in spite of all that we can do to prevent it. Antepartum death of the child may occur from intrauterine pressure on the cord or from premature separation of the placenta, complications which can not be foreseen, but that is no reason for not trying to foresee and prevent every possible complication, and thus giving our patients the benefit of every means at our command and to insure a good result.

A great improvement in obstetrics would be made if the profession as a whole could be made to realize that every parturient woman should be considered as a doubtful risk, in whom any complication may arise, and studied as such, instead of being considered as a normal patient in whom no abnormalities need be looked for. No two cases are exactly alike, and, therefore, the care which a patient receives should be adapted to her needs and not to those of some other patient or group of patients, if the best results are to be obtained. The needs of the individual patient can only be a careful study of her physical and nervous condition, and the environment in which she has been brought up and in which her future life must be passed, and on the results of such a study must the care given each patient be based, and nothing can be less intelligent or more likely to favor bad results than the adoption of a routine in the caring for obstetric cases.

In hospital practice where a large number of patients are cared for it is almost inevitable that the individual should receive comparatively little attention and that patients should be treated in groups, but that is one of the misfortunes of hospital work. In private practice, however, there is no excuse for not carefully studying each individual patient and selecting the treatment best suited to her needs. This, however, requires that the obstetrician take his work seriously, and shall have fitted himself to give his patient the care which she demands. The majority of the men who are doing obstetrics at the present time are not really inter-

ested in the work, and trust to luck that no complication will arise in a given case, rather than try to foresee and prevent such complications. No conscientious surgeon would consider himself qualified to perform a complicated operation without an adequate preliminary training, but the average medical practitioner feels himself qualified to take obstetric responsibilities which involve the life and health of two patients, and is willing to attempt serious operations which are far more difficult and require greater technical knowledge and skill than the average surgical operation without any attempt to fit himself for the problems he must meet. The reason for this indifference to the well-being of the patient is undoubtedly the recognized fact that the great majority of women will come through labor alive and with a living child, if left to the unaided efforts of nature, and, therefore, the average practitioner does not feel it necessary to fit himself to meet the occasional emergency which involves the life of either patient, and he almost never considers his responsibility in the future health of his patient, provided only she and her child come through labor alive. Faulty teaching in our medical schools is largely responsible for this attitude, because the students are instructed that such an overwhelming majority of patients will come through alive if left to the unaided efforts of nature that it seems a waste of time for the man who does not mean to be a specialist to fit himself to deal with the occasional complicated problem, since he can usually get some one else to assume the burden for him when he finds that he is unable to cope with it, although by the time he has reached this conclusion irreparable damage may have been done. Another fault in our teaching, it seems to me, lies in the fact that most of our teaching is based on hospital patients, who are largely of the peasant class and more or less uncivilized, so that the average physician enters practice largely ignorant of the fact that the civilized woman, who is often nervously overdeveloped, may require entirely different treatment in the presence of the same physical condition as her less civilized sister, unless she is to show serious effects from the strain she must undergo.

The object of the obstetrician who assumes the responsibility for any case must be three-fold.

The preservation of the maternal life is, of course, the first object to be considered in the care of a case, and there can be no doubt that the loss of a patient during parturition usually means that the needs of the individual patient were not appreciated, and that the complication which caused her death was not recognized at a sufficiently early date for her to receive the care she needed. Pulmonary embolism, of course, may occur at any time following labor, and unless it is secondary to a septic phlebitis is an unpreventable accident. It is unpreventable, indeed, if it follows a septic process, but the sepsis is almost always due to some fault in technique on the part of the attendant, which should have been avoided. The other obstetrical complications which commonly lead to maternal death, such as hemorrhage before or after delivery, toxemia, and infection can usually be avoided or at least treated successfully, if the patient is under sufficient close observation and the attendant is competent. Danger to the patient arising from cardiac complications or other chronic diseases should be recognized early in pregnancy, and in serious cases the ending of the pregnancy may be necessary to save the patient's life, but it is never safe to assume that, because another patient with apparently a similar organic lesion has come through her pregnancy successfully, the given patient will do equally well, until every possible means at our command has been exhausted in the attempt to palliate the condition. Of course supervening acute diseases will cause a certain mortality both of mothers and children, and this will prove unpreventable in the majority of instances, but the regulation of the patient's life may render her less susceptible to infection and less likely to expose herself to it, and thus be of considerable value.

The second object of the obstetrician is to insure the birth of a living, uninjured child. This is a most important aim, but none the less it must be considered as distinctly secondary to the preservation of the maternal life. It will happen in rare cases that the interests of the child must be sacrified for those of the mother, and the obstetrician will be perfectly satisfied if the maternal

life is preserved, no matter what the outcome for the child, but such a result must mean that the conduct of the case has not been entirely successful, although the attendant conditions may have been such as to make even this partial failure a satisfactory result. In our ignorance of the etiology of certain obstetric complications we are not able to apply adequate preventive measures in all cases, and the sacrifice of the baby may be necessary to save the mother, but such a result means that owing to our ignorance on certain points we are forced to be content with a partial failure, and obstetrics will never be entirely successful until these partial failures can be eliminated or at least much reduced in number.

The third object of the obstetrician is to bring the mother through her pregnancy and labor in such a manner that when her convalescence is completed she is ready to take her place in the grade of society to which she belongs in as good a condition to sustain the burdens of her ordinary life as before pregnancy began. We are all of us familiar with the fact that nature unaided is very often inadequate to meet this indication, and our aim must be to have such knowledge of the needs of each individual patient as will enable us to supplement nature when necessary. There is nothing in medicine which requires a more perfect judgment, and the most successful obstetrician will be the man whose judgment as to the needs of the individual and the methods which will meet those needs is least often faulty.

In following obstetric literature I have gained the impression that the preservation of the maternal and fetal life receives the entire attention of the average practitioner, and that the future welfare of the mother is so overshadowed by the other indications as to receive comparatively little attention. From the standpoint of the patient, however, her health may be nearly as important as her life, and a condition of chronic invalidism, due to a lack of proper care during pregnancy and labor, is just as clear a confession of failure on the part of the obstetrician to appreciate the conditions present in the individual patient as is the loss of either mother or child.

To one who studies his patients carefully and notes the indi-

individual differences between them, it must be clear that uniformly good results can only be obtained by the careful, intelligent study of each patient. Errors of judgment will be made by the most careful observer, but these errors will be reduced to a minimum if each patient is treated by herself and not as a member of a class to which certain general principles are applicable. In order to give his patients proper care the obstetrician must be familiar not only with the physical and nervous peculiarities of his patients and the way in which they have reacted to such strains, both nervous and physical, as they have been subjected to in the past, but he must be familiar with their mode of life and the conditions under which their future lives must be passed before he can give them adequate care. He may find it possible by proper advice to so regulate a patient's life as to materially alter an improper method of living, but generally speaking the most he will be able to do will be to adapt his methods to the patient rather than to change her attitude toward life.

The careful oversight of pregnancy is one of the most important items in the care of an obstetric case and is probably neglected more than any other portion of the parturient state. It is not at all uncommon to hear that a physician has not seen his patient for five or six weeks or even longer, and that although he asked her to send a specimen or urine for examination and to report at his office from time to time she has has not done so, and when he finally sees her he is not infrequently confronted with a serious complication, which might have been entirely avoided or successfully treated if his patient had been under proper supervision. This is of course the fault of the patient if she has not consulted any physician until late in her pregnancy, but if she has once placed her case in a physician's hands he must share the blame with her if he allows her to neglect his advice.

The average pregnant woman seems to feel that supervision of the pregnancy is unnecessary, as she usually is entirely ignorant of the possibilities of mishap. It is, therefore, part of the duty of the attending physician, for the patient's good and almost equally for his own, to insist that his patient report to him at regular intervals so that he can study the progress of the preg-

nancy, and note any departure from the normal in its early stages, and thus be in a position to determine what care the patient needs during the pregnancy, and to estimate her needs at the time of labor. Few patients will be found who will disregard the injunctions of their physician if the reasons for the advice are carefully explained to them, but most women are extremely ignorant about the hygiene of pregnancy, and what often seems to be disregard of the simple laws of health is due to ignorance, and unless the physician is in a position to appreciate this fact and to correct it as far as possible he may be seriously disappointed by the ultimate results in a given case. When a patient has been properly watched during pregnancy the attendant is in a strong position. He is able to say definitely whether his patient is or is not physically normal. The effect of the pregnancy on her physical and on her nervous condition is known and he can seldom be surprised by being suddenly called and finding his patient in a serious condition, since his constant observation of her will have shown him any abnormality in its early stages. By his preliminary examination in the latter weeks of pregnancy he knows, or should know before labor begins, whether any disproportion exists between the size of the child and the maternal pelvis, and from his previous observations he is able to estimate more or less correctly what the character of the labor will be, and what the effect of labor will be on her nervous and physical condition. With this thorough knowledge of his patient he is in a position to give her the care at the time of labor which she needs, and will never be placed in the unfortunate position of assuming a grave responsibility for a patient about whom he knows little or nothing. If she is of a nervous, high strung temperament, reacting in an exaggerated manner to minor impulses, she must be treated in an entirely different manner from the patient who is phlegmatic and who has never shown any marked reaction to the strains which have been laid upon her. To the patient whose nervous equilibrium is unstable the pain of even a normal labor may prove an excessive burden, and it may be necessary to shorten labor by operative means or even to do away with it altogether and to resort to a surgical delivery in order to save her from the nervous ex-

haustion which may result from a labor of even moderate severity, even though no physical abnormality is present. If she has reacted seriously to such strains as have fallen to her lot in the past, and particularly, if her powers of recuperation are poor, she must be recognized as being unfit to be subjected to any avoidable strain and be handled accordingly, whereas the woman who has always recuperated fully and rapidly or who has never shown any sign of failure under strain can be considered as a good risk, and allowed to undergo even a severe labor without fear. If the ordinary conditions of the patient's life are such as to tax her powers of resistance to the utmost, both her life during pregnancy and the conduct of labor must be so regulated as to do away with all possible strains, since many of these patients who are living under constant high tension have little or no reserve power, and if their slight powers of resistance are once broken down it may take months or years for them to recuperate, if indeed they ever recover entirely.

In a patient of this class it must be particularly remembered that she will probably return to the life which she has temporarily abandoned at the earliest possible moment, and that no amount of advice is going to materially alter that life, until either a nervous or physical breakdown renders a change imperative. It is particularly important, therefore, in patients of this class to so regulate the pregnancy and labor that all possible strain shall be removed, since if her equilibrium is seriously disturbed it may become necessary to remove her entirely from the burden of her ordinary life until her balance is restored, which may take weeks or months even, if it is ever entirely successful.

The obstetrician who treats all patients of a certain physical equipment in the same way will be much disappointed as to the results which he will obtain in certain cases, but if he devotes any thought to his work he must realize that many unsatisfactory results might have been avoided if he had studied his patient more carefully and suited his methods to her requirements.

There is no doubt in my mind but that many cases exist in every civilized community who are relatively or absolutely unfit for childbearing on account of either nervous or physical abnormali-

ties, and in these cases the methods employed in conducting the pregnancy and labor are of the greatest importance. The common saying that 95 out of every 100 cases will go through labor without trouble, even though they receive little or no care, has been responsible for a great deal of harm. It is undoubtedly true that the lives of both mother and child will be preserved in the great majority of cases in the absence of physical complications, even though the patient has received no care, but if we are to do our full duty by our patients and get the best results possible, we must go further and consider how to prevent childbearing from having serious after effects on the lives of our patients, particularly those who belong to the class of the unfit in whom comparatively minor lesions may be expected to produce exaggerated reactions.

It is a matter of common knowledge that improper care or better, perhaps, a lack of proper care at the time of labor furnishes the gynecologist with most of his operative material, and the neurologist also benefits largely from the blind acceptance of the dogma that childbearing is a normal physiological function, and that no special training is necessary to fit a practitioner to oversee it properly. Every gynecologist is familiar with the fact that many patients come to him who show marked lesions as the result of childbearing with comparatively slight symptoms, and he also sees other patients in whom exaggerated symptoms result from minor lesions. This difference among patients points definitely to the fact that obstetric patients must be treated as individuals and not as members of a class, to be judged merely by the question of whether any disproportion exists between the size of the child and the maternal pelvis, and that to obtain good results the needs of the individual must be ascertained and the care which she receives regulated in accordance with her needs. If obstetrics is to be done intelligently we must not wait for the patient's powers to fail before giving relief. In the patient who is comparatively normal no harm will result from allowing her to go through labor trusting to her own powers, simply terminating labor by an easy low forceps operation or allowing her to terminate labor naturally as may be deemed wise. In a patient of

equally good physical equipment the nervous equilibrium may be so unstable early in labor to avoid unpleasant consequences, and in the exaggerated cases it may be unwise to allow a patient to go into labor at all on account of the marked reaction which the patient has shown in the past to such strains as she may have been subjected to.

It may seem radical, perhaps, to advocate Cesarean section when no physical indications for the operation are present, but the fact has been repeatedly demonstrated that certain patients will undergo and recuperate rapidly from a surgical delivery who have been more or less seriously invalided by the strain of a prolonged labor in the past, and Cesarean section, furthermore, has the advantage of avoiding lacerations with their attendant symptoms and the possible necessity of a secondary operation to make good the obstetric damage. The prejudice which exists among certain members of the profession against Cesarean section on the ground that it is an unnatural method of delivery, and, therefore never to be employed except for physical necessity seems to me beside the point. In our modern civilization we are not dealing with normal, natural women, and the abnormal patient must be cared for in an abnormal way, if good results are to be obtained. There is no question to my mind but that the results of Cesarean section in competent hands are better for both mother and child than the results of difficult forceps operations or versions, and since the object which the obstetrician has in view is the best good of his patient, it seems time to depart from the traditions of obstetrics and give our patients the care best suited to their needs.

The practitioner who follows blindly the teaching of the past will undoubtedly prefer to deliver every patient through the natural passages, if possible, although this may involve such a difficult operation as to place the mother's life in jeopardy and possibly lose or injure the child, and will pride himself on each case in which he succeeds in extracting a living baby by a difficult pelvic operation, entirely ignoring the fact that to accomplish his object he had subjected both mother and child to a serious risk

of loss of health, if not loss of life, and will quote the result as a triumph of conservatism.

This brings us naturally to one of the great questions in obstetrics at the present time. What is real conservatism? The so-called conservative claims that childbearing is a normal physiological function which every woman is fitted to fulfill as long as no actual disease or marked physical abnormality is present. Such an attitude of mind means to me that the so-called conservative has devoted little or no thought to the future well-being of his patient and simply considers that the outcome of her labor is successful as long as both mother and child are fortunate enough to be alive.

The obstetrician who advocates delivery by surgical means for a patient in whom physical indication for operation can be demonstrated is classed as a radical, and the term is employed as one of reproach, implying a mental attitude which denies the sovereign power of nature and advocates the substitution of surgical methods of delivery for the natural processes.

It seems to me, however, that the above definition of conservatism is open to question, since the first object of every obstetrician in the care of a case should be the best good of his patient, and every patient whose health suffers from the effects of childbearing or whose baby is lost is an example of a lack of conservative care, since such a result shows that the needs of the individual patient have not been appreciated. Unfortunately we all see such cases in our practice.

The essential difference between the so-called conservative and the so-called radical is that the conservative adheres blindly to the methods of the past and refuses to give his patients the benefits of modern progress with the result that the gynecologist sees many patients who date their ill health from childbirth. Each patient who gives a history of this sort is an example of improper obstetric care, or at least of a lack of proper care.

The so-called radical is trying to give his patients the benefits of modern progress. He may go too far and perform some unnecessary operations in the fear that his patients can not safely undergo the strain which a possibly difficult labor may entail, and

he will undoubtedly treat many border-line cases according to surgical methods perhaps unnecessarily instead of running serious risks with them by following out traditional procedures.

It seems to me, however, that the essence of true conservatism lies in the careful study of the patient and the selection of the method of treatment which seems to offer the least risk of a bad result.

I do not claim that the majority of patients, or even any large minority, should be subjected to a surgical delivery, but I do believe that there exists in every civilized community a considerable number of women who should be spared all possible strain, and for whom the strain of labor may be a serious burden, and in whom the danger of lacerations, with their attendant symptoms, are to be avoided by every possible means. In other words, every patient should be studied as an individual, and the greatest care should be taken in adapting the methods employed in the conduct of her pregnancy and labor to her nervous and physical equipment, both from the standpoint of the immediate result and her future well-being.

Errors of judgment will undoubtedly be made by every obstetrician, but it is only by such a study that we can raise the standard of obstetrics. That the standards of obstetrics need to be raised seems to me an unanswerable proposition. When thoughtful physicians are willing to say publicly, that the training and licensing of midwives is an economic necessity, because the poor can receive better care and be placed in less danger, if cared for by midwives than by the members of the medical profession they are in a position to employ, there can be little doubt but that the standards of obstetrics need to be changed, and one of the important steps in making this change, is that their patients as individuals, each of whom may require special treatment, instead of grouping them together and assuming that every patient can take care of herself is left to nature. In addition every student should be made to realize that if he means to handle obstetric cases he must fit himself to take proper care of them instead of trusting to luck or nature.

Although the greater part of this paper has been devoted to

the needs of the patient during pregnancy and labor, it must not be forgotten that the after-care of the patient counts for a great deal in the ultimate outcome of the case. My time is too short to take this up in detail, but the careful supervision of the convalescence will count for much in the patient's future health, and should be thoroughly followed out.—*New York State Journal of Med.*

Extracts from Home and Foreign Journals.

SURGICAL

The Thermic Treatment of Cancer.

There appears to be a consensus of opinion that cancer is increasing in civilized countries. The statistics quoted by Mr. Frederick L. Hoffman in his paper read before the recent meeting of the Clinical Congress of Surgeons of North America afford sufficiently conclusive evidence that cancer has increased and is increasing in this country. Indeed, evidence gathered from most countries goes to show that cancer is really increasing. According to the report of the Minister of the Interior of France just issued the cancer death rate in that country shows an increase of 12½ per cent in five years. This being the situation it is not surprising that the general public as well as the medical profession taken an intense interest in any measures suggested as likely to be of a curative and remedial nature. De Keating-Hart of Paris has a paper in the November number of the *Practitioner* on the rational treatment of cancer. Referring to the treatment of what he terms curable cancer he says: "Within the past few years X-rays and radium have revolutionized the treatment of cancer condemned as inoperable, and the application of fulguration after an extensive operation has given most gratifying results. Curable cancer may be divided into operable and inoperable. When practicable, an operable cancer should be removed. To submit a growth to the action of the X-rays, necessitating a protracted period of therapeutic treatment, involves a great risk of autoinfection; whereas, by excision of the growth and the competent application of fulguration, the patient is given an increased chance of recovery which should not be ignored."

Commenting upon the treatment of inoperable cancer, De Keating-Hart points out that it is not necessarily incurable, as the

many successes due to X-rays and radium indicate. However, the action of radium is limited, the effective area of Röntgen rays is more extensive, but to secure complete destruction of the tumor, the rays must traverse healthy tissue in such massive doses as seriously to injure its vitality. To counteract this defect of radiation, thermoradiotherapy must be brought into use. The author draws attention to the fact that the radiosensibility of living tissues is governed by a law which is, other things being equal, that the radiosensibility of living cells depends upon their temperature; in other words living cells are more sensitive to destructive agents in general and to X-rays in particular, when influenced by heat than when temperature is low. Thus by heating the tumor itself and by cooling the skin, better results can be obtained than by the ordinary method of Röntgen therapy. De Keating-Hart's conclusions are as follows: (1) In the absence of a general specific treatment for cancer, surgery may cure before the period of general infection. (2) Failure in operation will be very rare if associated with sparking, even after a limited excision. (3) Thermoradiotherapy, association of heat with radiations, will intensify the deep therapeutic value of X-rays and of radium in the treatment of many inoperable tumors.—*Medical Record.*

Treatment of Fissure of the Anus with Tincture of Iodine.

Dr. Marchal of Tulle in the *Province Medicale* (No. 51) describes as follows a process which he advocates as treatment for fissure of the anus, a process which is invariably successful and which he has employed in extremely painful fissures and in small fissures not excessively painful but persistent.

One author writes as follows: The diagnosis of fissure having been well established, that is to say the fissure exposed, I warn the patient that I am going to make a light cauterization, which repeated three or four times at intervals of three or four days, will most certainly effect a cure. When I have informed the patient that he would only feel a sharp pain for a few minutes

and that unless he would be willing to undergo this treatment, he would have to submit to an operation, he would not hesitate to agree to the treatment.

With the aid of an assistant, I expose the fissure thoroughly and after cleaning off the surface with cotton dipped in hot water, I cauterize it freely with a brush dipped in the tincture of iodine. That is all. Three or four times at intervals of three or four days, I make the same application. From the first day there is a marked reduction of the pain and on the third or fourth cauterization the cure is effected.

The little pain, especially on the first cauterization, lasts but a few minutes and has always been well borne; so well, indeed, that I no longer employ as I did at first local anesthesia with cocaine. All the patients have remained cured. One of two that I had cured several years ago returned with a recurrence asking for the same treatment which effected a cure in three applications.

Finally I treated a lady recently for other reasons very nervous who having been treated by forcible dilatation fifteen years before was in reality overcome with the idea of submitting herself again to this operation for the recurrence of the fissure. She was cured in three applications.—*Journal de Medecine et de Chirurgie, January* 24, 1914.

The Radium Treatment of Cancer.

A number of brilliant papers on the therapeutic uses of radium were read at the last International Medical Congress, remarks the editor of the *New York Medical Journal.* Few of these attracted greater attention than that of Dr. Robert Abbe, of New York, who reported his success with this remedy in treating malignant disease. Basing his remarks on some 750 patients including 250 epitheliomas, in various regions, and 180 carcinomas of peripheral tissues, breast, tongue, throat, esophagus, etc.; fifty sarcomas of the skin, parotid, etc.; and various other types of growth, he urged that provided the gamma rays (the alpha and beta rays being removed by filtration through lead, thus producing a form of radiation analogous to X-rays and of very great

penetrating power), be used and correct doses be the rule, the outlook of this method of treatment was decidedly promising. There is established a retrograde degeneration of the malignant cells, which in a relatively large proportion of cases leads to a cure.

While surgical methods should continue to be given preference whenever at all possible, with radiumization of the bed of the wound to obtain degeneration of what malignant cells the exposed tissues may contain, the fact remains that radium has earned for itself the position of "next best" with fair promise to outstrip the knife. It has besides many advantages over the latter. As emphasized a few months ago by Williams and Ellsworth (*Journal of the American Medical Association,* May 13, 1913), the application of pure radium bromide in sufficient amount, properly used, is a painless and efficient method of treating early superficial new growths. This in itself is a distinct advantage over the knife, for a patient will almost invariably postpone surgical methods until the malignant tumor is well advanced, while practically no one would hesitate to undergo the absolutely painless exposure to radium, thus insuring early treatment and increasing greatly the chances of success. Again, radium seems to be more successful when it is the first treatment employed than when it is used after operation, X-rays, or other forms of treatment.—*The Medical Brief.*

Quinin and Urea Injections in Hyperthyroidism.

Dr. Leigh F. Watson reports in the *Journal American Medical Association, January* 10, 1914, a number of cases of goiter treated by injection of quinin and urea hydrochlorid. The patients had been on medical treatment for from one to two years without improvement. In one case both superior thyroid arteries were ligated. This patient was suffering from the classical symptoms of goitre: nervousness, insomnia, tremor, with enlargement of both lobes of the thyroid, as well as of the isthmus, and increased pulse beat. Ninety minims of a 1 per cent quinin and urea hydrochlorid solution was injected into the body of the right lobe, sixty minims into the left and the same quantity into the isthmus. The

pulse decreased by degrees from 160 to 80. Insomnia, nervousness and tremor disappeared within forty-eight hours.

Two other cases are reported where injections alone were made (without ligation), in which there were the usual symptoms, together with tachycardia and diarrhea, in one some exophthalmos. Two and four per cent solutions were used respectively in these cases, injection being made direct into the thyroid, as well as in the isthmus.

Improvement promptly followed, the pulse beat becoming less frequent, nervousness abating, while the diarrhea ceased, both patients gaining in weight. In these two cases the injections were the only treatment. Whether the results in these cases will be as lasting as in the first, when both injections and ligation were performed, remains to be proven.—*The American Practitioner.*

Surgical Treatment of Hyperthyroidism.

In order to minimize hemorrhage during the excision of part of the thyroid gland, the author first ligates the superior and then the inferior thyroid arteries in the following manner: After dislocating the gland from its bed, he elevates the apex of the gland on his index finger, locates the superior thyroid artery by palpation, passes a curved round needle, armed with a ligature, around the apex, and ties the vessels and gland *en masse*. Then he introduces the index finger under the outer lower edge of the gland, turns this over as far as possible, locates the primary branches of the inferior thyroid artery by palpation or sight, passes a curved round needle, armed with a ligature, deeply through the thyroid gland from one side of thoese primary branches to the other, and ligates vessels and gland tissue *en masse*. This avoids the recurrent laryngeal nerve absolutely, insures an almost bloodless excision, and permits of leaving in the posterior third of the gland with its all-important parathyroids.

In order to insure a good cosmetic result, the platysma, fat, and fascia are united carefully by a running suture introduced in the following manner: A round curved needle with ligature is

passed through these tissues as usual and tied, and then the needle is carried from below these tissues up to the skin, emerging just at its edge. Next the needle is again carried to the bottom of the wound on the opposite side, going up through the tissues and emerging again at edge of skin. This is repeated until the entire wound is closed. Then the skin is sewed by a continuous overcast stitch, two layers of gauze applied over the entire incision and sutured with collodion, and a thick gauze dressing applied while the collodion is still fluid. The above stitch holds the superficial tissues in better and closer apposition and relieves the strain on the skin suture. The collodion acts as a splint and holds the edges of the skin absolutely quiescent during the time of healing. Ten days after operation the dressing should be removed.

Iodized catgut is used throughout the operation. Drainage through a stab-wound should be used after every excision for hyperthyroidism. The edges of the fibroid capsule should be brought together by a running suture over the raw glandular surface except at its very lowest point, where the drainage-tube should enter. Where the drainage-tube emerges from the skin a separate dressing should be applied, so that it can be changed at any time when it becomes saturated with wound secretion without disturbing the dressing over the original incision.

The author purposely omits reference to excision of part of one lobe, and tying of the other superior thyroid artery as the operation of choice, because when one whole diseased gland is left, hyperplastic growth may continue in this more easily than would be the case if part of it had also been removed. The additional time consumed in excising part of the second gland after tying its superior artery would be so short as to become negligible. *Monthly Cyclopedia and Medical Bulletin.*

MEDICAL

Bleeding in Typhoid.

In studying the last 1,591 cases of typhoid treated in the Toronto General Hospital it appears that the mortality was 8.67 per cent over all, but that the death-rate among those reported as having had one or more hemorrhages was 37 per cent. This latter figure is almost the same as occurred in Cruschmann's series at Leipsic, which was 38 per cent, while in Strümpell's forty-five cases of hemorrhage in typhoid it was 42.2 per cent. In the Toronto series, excluding the cases that had bleeding, the mortality of the remaining 1,464 cases was only 6.3 per cent. Rudolf cities twelve cases which show how the bleeding was followed by a more or less marked fall not only in the temperature but also in the pulse rate. They are said to be the best examples, but most of the other 115 charts of cases with bleeding showed more or less of the same thing. The improvement in the temperature and pulse curves, while often transient, in some cases lasted for days and even ushered in convalescence.

Rudolf agrees that it is difficult to explain how the good effects that may follow a hemorrhage come about. There is no doubt, however, but that it produces a profound effect on the whole bodily economy. Thus bleeding has been shown to bring about an increase in the low flow of urine, to greatly increase the intake of oxygen, with proportionate raising of tissue-oxidation. It hastens the coagulation time of the blood more than does any other single agent. It produces a rapid increase in the antibodies contained in the blood. The agglutinating power of the blood is enormously raised by the bleeding. Further, in toxic conditions, such as uremia and other less-defined states, states in which there is high blood pressure, bleeding appears in some way to lessen the toxemia, and possibly in typhoid it may have some similar effect.

Rudolph agrees with Whitehead, who two years ago, suggested that the good effects of hemorrhage in typhoid might be attained and the evil ones (associated with intestinal hemorrhage) avoided

by the timely use of venesection in those cases which are not doing well on account of severe infection and toxemia. Venesection, he says, appears to be indicated in severe cases and if the removal of blood by venesection be a moderate one, say of 6 to 14 ounces, it can do no harm and may possibly be productive of great good. —*The Journal of the American Medical Association.*

The Use of Urotropin in Dermatology.

Otto Sachs reports beneficial results from the internal administration of urotropin in doses of from 4 to 6 grams a day. Of 82 cases of herpes zoster treated in this manner 78 were cured and 4 improved. Formaldehyde is split off and has been recovered from the skin lesions. The action of urotropin may be regarded as specific in this condition since the affected lymph nodes decrease in size, the burning pains in the herpes region disappear, and the accompanying severe neuralgia is relieved. Local treatment is entirely unnecessary. The results of urotropin therapy in 29 cases of erythema exudativum multiforme et bullosum were not quite so brilliant since recurrences were not prevented. In impetigo contagiosa and eczema impetiginisum the urotropin treatment constitutes a great step in advance since all local treatment —especially awkward bandaging—is unnecessary, the hair of the scalp and beard does not have to be sacrificed and even very extensive lesions can be healed up in ten to fourteen days.—*Critic and Guide.*

Caffeine as a Heart Stimulant.

Ortner regards caffeine as a more efficient substitute for digitals than is either strophanthus, sparteine, or convallaria. He states that in physiological doses caffeine strengthens the heart muscle, expands the coronary vessels, increases the peripheral arterial pressure, quickens the pulse at first and then slows it, and increases diuresis by direct stimulation of the renal epithelium. It is the best substitute for digitalis if the blood pressure is low—never if it is high—and its use is particularly advisable if marked

alterations in the heart muscle contraindicate digitalis. It has an effect in the last stage of cardiac insufficiency when all other heart stimulants are useless.

Caffeine is best given in one of its loose double compounds, as caffeine-sodium benzoate, caffeine-sodium cinnamylate, and caffeine-sodium salicylate. As a heart stimulant the dose of any one of these is 10 to 15 grains daily. The following prescription is recommended:

℞ Caffeine-sodium benzoate or salicylate.. 3 grams
Distilled water ..... 130 grams
Jamaica rum ..... 20 grams

Of this solution I tablespoonful should be given 3 times a day.

A solution of caffeine is preferable to a powder, as caffeine in the solid form causes in many individuals discomfort or pain in the stomach, nausea and vomiting.

Caffeine may be administered together with digitalis, as in the following:

℞ Infusion of digitalis..... 180 grams
Caffeine-sodium benzoate ..... 1 gram
Simple syrup ..... 15 grams

The dose of this mixture is 1 tablespoonful 3 times a day.

Braun has shown in experiments on animals that caffeine counterbalances the tendency of digitalis to contract the coronary vessels of the heart.—*Medical Record.*

Foci of Incipient Tuberculosis.

In adults the existence of an incipient pulmonary tuberculosis can be demonstrated easily by careful percussion (provided that during the examination of the front of the chest the patient is in the recumbent position with relaxed muscles) long before any bacteriologic evidence is obtainable, and while the auscultatory evidence is insufficient for a diagnosis. In the upper lobe of each lung a focus of incipient pulmonary tuberculosis can be detected by careful percussion in the inner part of the first and

second intercostal space in front, and in the inner part of the suprascapular space. A second focus can be detected in the outer part of the first and second intercostal spaces in front, and in the outer part of the suprascapular space. A third focus can be detected in the upper part of the lower lobe on each side by careful percussion at the posterior end of the scapular spine. These six dull areas are present in all cases of early pulmonary tuberculosis. I believe that they are not produced by any other morbid condition, and that they are sufficient for the diagnosis of a (past or present) tuberculous infection. Whether that infection is active or quiescent must be determined by the symptoms and auscultatory signs. In addition to the six apical areas, many other small dull areas can be found in the lungs in cases of early pulmonary tuberculosis. The position of these areas is practically invariable; they are nearly symmetrical in the two lungs, but show certain differences, which evidently result from the existence of three lobes in the right lung and of only two in the left.—D. B. Lees, M.D., in *Brit. Jour. Child. Dis.*

A New Sign in Pneumothorax, Particularly Artificial Pneumothorax.

In a careful study of over eleven cases of both spontaneous and artificial pneumothorax in pulmonary tuberculosis I have observed in every patient a condition of spasticity or rigidity of the rectus and abdominal muscles in the upper quadrant of the abdomen on the same side as the lesion. This "sign", as I so designate it, has been constant in every case. I have repeatedly pointed it out and had it verified by my associates. In my most recent case, a physician, on whom I performed artificial pneumothorax for persistent hemoptysis, the spastic condition of the left rectus (upper segment) and region of the epigastrium was so marked as to make a visible tumor. The patient noticed this himself and was much interested, as it seemed to vary in tenseness with the tension in the chest. This area is also hyperesthetic.

On account of the increasing amount of work done on artificial pneumothorax as a method of treatment for pulmonary tu-

berculosis, I am anxious to have other observers watch for this sign, so that it may be established or rejected as soon as possible. Reflex spasm of the abdominal muscles from lesions in the pleura, pericardium and other thoracic viscera is a well-established fact. To my knowledge its observance as a sign of pneumothorax is for the first time described. It has only recently been shown by Capps that the outer rim of the diaphram and the parietal pleura are supplied by the lower intercostal nerves, and these also supply the skin and muscles over the abdomen. The patients on whom these observations were made were free from acute pleurisy, pericarditis and abdominal inflammatory conditions, as necropsy in two of the cases showed.

I trust that this sign, if verified, will prove a valuable guide in the production of an artificial pneumothorax. So far, this sign has persisted throughout the course of the condition, it was well marked, easily found and at times could actually be seen on inspection. I trust to publish in full a complete report giving details, and I hope that others will make similar studies.—*The Journal of the American Med. Asso.*

"Innocent" Diabetes of Children.

Salomon uses this expression to designate a form of diabetes in childhood differing radically from the ordinary severe types. This may be seen in two or more children of a family (family glycosuria). Neurotic inheritance may be present. The amount of sugar excreted is small; much smaller than in true juvenile diabetes. As a rule there is no increase in the amount of blood sugar. There is no tendency of the disease to progress, despite the growth of the subjects. In a carbohydrate-free diet it is common to see an increased excretion of acetone, which disappears rapidly when carbohydrates are added to the diet. The patients as a rule feel well and do not know that anything ails them aside from certain petty nervous disturbances. The sugar in the urine of an infant may cause sugar exanthem on the thighs, etc. Both this mild and the severe type coexist in one subject (diplomellituria). Many

children with this affection have been condemned to death by physicians who know nothing of "innocent" diabetes.—*Medical Record.*

OBSTETRICAL

Gynecological Hints.

From ten to twenty per cent of all gynecological cases are due to gonorrhea, and at least fifty per cent of cases of sterility are caused by the gonococcus.

The more external the situation of a genital organ the more liable it is to gonorrheal infection. Thus the urethra is involved in from 90 to 95 per cent of cases; the cervix in from 70 to 75 per cent; the uterus in from 10 to 15 per cent, and the Fallopian tubes in from 3 to 5 per cent. In most cases of gonorrhea the vagina is involved at some stage of the disease, but the infection is of short duration, except when it is continued by infected discharges from other localities, as from a gonorrheal process in the cervix.

Any or all the glands in or about the female genital organs may be infected by gonorrhea; but the most important are the glands of Bartholin and Skene.

The glands of Bartholin are not as frequently infected as some observers have led us to believe, but when they are, an abscess usually results that is rarely cured without extirpating the gland. If these abscesses are allowed to rupture spontaneously or are simply incised they are very liable to recur. These recurrences may extend over a number of years. If, however, the abscess cavity is thoroughly curetted this will be prevented.

The ducts leading to the glands of Skene are located at each side of the meatus urinarius, and gonorrheal infection is very apt to be carried along them into one or both of the glands. When these glands are infected there is very little tendency for them to recover, and the discharge from them will continue the infection of the urethra indefinitely. This condition can be easily

cured by freely opening the ducts, extending the incision well into the glands. The local application of a solution of cocain will make this little operation practically painless. After this any existing gonorrheal infection of the urethra can usually be cured in a short time by the application of a solution of one of the organic silver preparations or a weak solution of nitrate of silver. The female urethra will tolerate much stronger solutions of the nitrate than the male. These applications to the urethra are best made with a small syringe and should extend over the whole length of the canal.—*International Journal of Surgery.*

Relief of Pain in Gynecological Cases.

Dr. G. Merkel has employed novaspirin as an anagelsic in gynecological and obstetrical practice for about one and one-half years. In cases of uterine cancer he administered the drug in doses of 0.5 to 2.5 gm. (8-40 gr.) pro die. In four the result was excellent, and in one the analgesic effect after 1.0 (15 gr.) extended over two days. It also acted promptly as a sedative. In peritonitic pains due to gonorrheal disease of the sexual organs, novaspirin acted well in doses of 0.5 gm. (8 gr.) twice daily (6 cases). It proved of eminent service in the menstrual colic of young girls, being administered as soon as there was the slightest pain in the sacral region or other prodromal symptoms of commencing menstruation; and even when the well-known nausea was present a dose of 1.0 gm. (15 gr.) prevented the further development of severe colic, or at the most another dose of 0.5 gm. (8 gr.) had to be administered after 4 hours (14 cases). In cases of uterine colic following applications to the endometrium, the use of novaspirin, 1.0 gm. (15 gr.), afforded relief of pain within 10 minutes. It is now the author's custom to give novaspirin regularly after childbirth to nursing women for the prevention of severe after-pains. In doses of 0.5 gm. (8 gr.), 2 or 3 times daily, it was found to produce a completely painless puerperium.—*International Journal of Surgery.*

Uses of Ovarian Extract.

The author points out that in some forms of dysmenorrhea, a condition which he attributes to a mild degree of hyperthyroidism, ovarian extract is of great value. It was also found useful in lactation, atrophy of the uterus, and in the flushes of the climacteric period, natural or artificial, especially if administration is begun early. In anemias, including genuine chlorosis, it also served well. Combinations of iron, arsenic, and ovarian extract are particularly useful in such cases; whenever iron is indicated the author gives ovarian extract with it. In amenorrhea, relative or absolute, he has found ovarian preparations the best remedy. They produce no untoward results and the main contraindication consists of profuse bleeding. He often combines ovarian extract with thyroid, especially to promote metabolism and encourage oxidation. The annoying symptoms sometimes produced by thyroid are often greatly diminished by the addition of ovarian extract.—S. Wyllis Bandler in *Archives of Diagnosis*, January, 1913).

Thyroid Tissue Tumor of the Ovary.

George W. Outerbridge, Assistant Pathologist to the University of Pennsylvania (*American Journal of Obstetrics and Diseases of Women and Children, December,* 1913), reports (illustrated by a handsome colored plate), two cases of thyroid tissue tumor of the ovary. The tumor was removed by Dr. A. C. Wood. The history of the case, the operation and the tumor are given. After reviewing the literature of the subject and analyzing the cases reported so far, some fifty in number, Outerbridge comes to the following conclusions:

1. In certain ovarian tumors there occur areas of tissue which can not be distinguished histologically from that of the thyroid gland.

2. Between tumors which show a complex teratomatous structure, containing among numerous other elements a small amount

of thyroid tissue, and those composed solely of this, there is no sharp dividing line.

3. All these tumors are of similar genesis; they are teratomata, with varying degrees of suppression of the ectodermic and mesodermic elements.

4. The large majority of these tumors are clinically benign; the few which are malignant show, in most instances, areas of unmistakable irregularity in their cellular structure, or give other histologic evidendce of having assumed a destructive type of growth.

5. The thyroid tissue in the ovary is of no functional significance, at least in the vast majority of cases, and these growths give rise to no symptoms other than those which would be produced by any type of ovarian tumor of equal size.

6. The term "Teratoma thyroidiale ovarii" is suggested as the most satisfactory designation for those tumors in which the thyroid tissue forms the dominant feature.

An extensive bibliography is given.—*The Lancet Clinic.*

Retroversion of the Uterus and the Dorsal Position in the Puerperium.

W. G. Gayler, after noticing the common lack of mention of the subject of posterior displacement of the uterus occurring without being caused by obstetrical injuries, says that a very few gynecologists are now adding a fourth cause, namely, the dorsal position during the puerperium. The uterus after delivery is more freely movable than at any other time and is large and heavy. It occurred to the author in delivering a woman who had previously had the round ligaments shortened for retroversion that it would be worth while not to put them under strain after delivery. He asks, "Are we ever justified in putting the recently delivered woman in the dorsal position? The uterus is then larger and heavier than at any time during the life of a woman, excepting before delivery, when a posterior position is impossible. The ligaments have not undergone involution and can not support the uterus. The normal bladder irritability is usually lacking for several days, often causing unsuspected bladder distention.

An overdistended bladder, more than anything else, will tend to push a uterus out of position. In short, it would seem that the dorsal position during the puerperium is the ideal condition for the production of retroversio uteri. There occur: (1) temporary weakened ligaments; (2) lack of any but ligamentary support; (3) exceedingly heavy and freely movable uterus. Practically all the textbooks on obstetrics ignore the position during the puerperium period, but some of the authors to whom the author has mentioned the subject promised to include it in future editions. The author believes that the dorsal position should be avoided unless proper drainage of the lochial discharge should demand it.—*Medical Record.*

Treatment of Dysmenorrhea.

Stolper has found atropin extremely valuable in curing the tendency to painful menstruation. He explains its efficacy as owing to its relaxing influence when the automatic nervous system is in a state of hypertonicity. The pronounced spasticity from vagal over-stimulation brings on pain at menstruation, and atropin wards this off or cures it. In a certain proportion of the cases, however, it seems absolutely ineffectual; his study of this refractory group showed that they all had one feature in common, namely, an unusually high blood-pressure. He now tests the blood-pressure as a routine measure before giving the atropin; if it is found within normal range, he gives the atropin and can count confidently on the desired response. If the blood-pressure is abnormally high there is no use in giving atropin; treatment must be directed to reducing the blood-pressure, and the cause must be sought and removed. It very frequently is found in the pelvis, a tumor or inflammation in one of the genital organs or chronic constipation causing local distribution in circulation. When the cause is removed the blood-pressure becomes normal and the dysmenorrhea either is conquered or then becomes amenable to belladonna. The women with dysmenorrhea which can be cured with atropin generally display other signs of vagotony.—*The Journal of the American Medical Association.*

Editorial

PUBLISHER'S NOTICE—The Journal is published in monthly numbers of 48 pages at $1.00 a year, to be always paid in advance.

All bills for advertisements to be paid quarterly, after the first insertion of the quarter.

Business communications, remittances by mail, either by money order, draft, or registered letter, should be addressed to the Business manager, C. S. Briggs, M. D. corner Summer and Union Streets, Nashville, Tenn.

All communications for the Journal, books for review, exchanges, etc., should be addressed to the Editor.

TENNESSEE ANTI-NARCOTIC LAW.

We append herewith the law bearing upon the sale, purchase, and dispensing of narcotic drugs by pharmacists and by physicians dispensing these drugs. The object of this law is certainly commendable in the extreme, for it has for its aim placing a ban upon the promiscuous use of narcotics which in this State as in all other parts of the country, has of recent years grown to an alarming extent. The ratio of drug users to the population bids fair to rival that of China where it has long been the national curse. It is a question as to which is the greater evil, the alcohol habit or the opium or cocaine addiction. That this law will work untold hardship upon opium and cocaine habitues in that these drugs can now only be procured along a line of red tape that is labyrinthine in its windings is easily conceived, that it entails upon the pharmacist an additional amount of work in the required registration of sales and purchases is obvious and that the prescribing physician is at a loss at times to figure out just "where he is at" so as to put him on safe ground where he will not violate the law, is readily apparent. In our interpretation of the law we really can not see how the physician who prescribes these drugs is affected. It is required that the prescription shall be dated, but it does not specify whether the date should be placed by him or by the druggist. We know of a physician of this city who was arrested recently on an indictment charging him with "dispensing and selling" heroin powders when we had only written a pre-

scription for this drug. We know of another instance in which a prescription for cough medicine had been turned down because it contained four grains of codeine as one of the ingredients. So we are at a loss to know how to regulate our prescriptions to conform to the law. It appears that the law applies principally to the country physician who doles out his own medicines, for it places him in the same class with the pharmacists so far as the distribution of this class of drugs is concerned. However defective this new law will prove to be in its workings we recognize its altruistic tendencies and trust that it may prove of good. The question is will it lessen the evil by the exercise of its rigorous requirements? While it puts obstacles in the way of obtaining the drugs from local dealers, it does not prevent users from procuring it from abroad—as in the State-wide prohibition laws it is difficult to obtain liquor at home, but interstate shipment is not interdicted and thereby it can be procured with little difficulty in this way. We hope the law will be productive of good and we shall watch its workings with the greatest interest.

TENNESSEE ANTI-NARCOTICS LAW.

CHAPTER II. FIRST EXTRA SESSION, ACTS 1913.

AN ACT to regulate the sale, barter, distribution, storing or giving away of opium, coca leaves, or any compound manufacture, salt derivative, or preparation thereof, and providing penalties for the violation thereof.

SECTION 1. *Be it enacted by the General Assembly of the State of Tennessee,* That on and after the taking effect of this Act, it shall be unlawful for any person in the State of Tennessee to sell, barter, distribute or give away any opium or coca leaves, or any compound, manufacture, salt, derivative or preparation thereof; provided, that this shall not apply:

Defining Manner of Sale.

a. To the dispensing or distribution of any said drugs to any patient by a physician, dentist or veterinary surgeon, registered

in the State of Tennessee under the provisions of the several Acts regulating the practice of their profession; provided, however, that said distribution or dispensing shall be in the course of his professional practice only, and that such physician, dentist, or veterinary surgeon shall personally attend such patient.

b. To the sale, dispensing, or distribution of any said drugs by pharmacists registered under the laws of the State governing the practice of the profession of pharmacy to a consumer under and in pursuance to a written prescription issued by a physician, dentist or veterinary surgeon of the standing mentioned in "a" above; provided, however, that such prescription shall be dated as of the day on which signed and shall be signed by the physician, dentist or veterinary surgeon who shall have issued the same.

c. To the sale or distribution of any of the aforesaid drugs by any wholesale druggist, dealer or jobber within the State to a retail dealer.

Defining Manner of Registration.

SEC. 2. *Be it further enacted,* That every wholesale or retail dealer shall keep in his place of business a registry, to be made in accordance with the rules and regulations hereinafter provided for; said registry shall plainly show all purchases made by said persons of the aforesaid drugs, date purchased, from whom purchased, and amount of said purchase. He shall likewise keep a registry which shall show all sales of said products, including the date on which sale is made, the amount sold and to whom sold. All retail dealers and pharmacists doing business pursuant to the terms of this Act shall likewise keep on file for a period of two years all prescriptions containing such drugs, which have been filled by them.

Said records of every character shall be open to inspection by all State and municipal officials who are charged with the enforcement of any law or municipal ordinance regulating the sale, prescribing, dealing in, or distribution of the aforesaid drugs. Physicians who shall dispense or distribute any of the aforesaid drugs provided by this Act shall keep a duplicate of all prescriptions issued by them for a term of two years, and said duplicates shall

be subject to inspection by any of the officers named in the preceding paragraph.

Possession of Presumptive Evidence.

SEC. 3. *Be it further enacted,* That the possession or control of any of the aforesaid drugs, by any persons other than those excepted in Section one (1) and two (2) of this Act shall be presumptive evidence of a violation of this Act; provided, that this section shall not apply to any employe of any person exempted as above, who has such possession or control by virtue of his employment, and not on his own account, or to any United States, State or Municipal officer, board or other authorities who or which has possession of any such drugs for purposes of investigation, enforcement of law, or otherwise; or to a warehouseman holding possession of same for a person exempted under the provision of this Act, or to common carriers engaged in transporting such drugs; provided further, that it shall not be necessary to negative any of the aforesaid exemptions in any complaint, information, indictment, or other writ or proceeding laid or brought under this Act; and the burden of proof of any such exception shall be upon the defendant.

SEC. 4. *Be it further enacted,* That the provisions of Section 2 above shall not apply to any person who keeps the records therein named in accordance with the laws of the United States as now existing, or which shall hereafter be made providing for such records.

SEC. 5. *Be it further enacted,* That the word "person" as used in this Act shall be construed to import the plural or singular, as the case demands, and shall include firms, corporations, companies, societies, and associations.

Duties of Food and Drug Inspector and Secretary State Board of Health.

SEC. 6. *Be it further enacted,* That it is hereby made the special duty of the Pure Food and Drug Inspector and his duly appointed assistant inspectors and chemists to specially enforce the

provisions of this Act, and rules and regulations for its enforcement shall be made by the said State Pure Food and Drug Inspector, and the Secretary of State Board of Health.

SEC. 7. *Be it further enacted,* That any person who shall disclose any of the information contained in the registries, prescriptions or other records mentioned in this Act, except for the purpose of the enforcement of the provisions of this Act, or of enforcing any other law of the State or the ordinances of any municipality, shall be guilty of a misdemeanor, and shall, upon conviction thereof, be fined and imprisoned as hereinafter provided.

Making Exemptions.

SEC. 8. *Be it further enacted,* That the provisions of this Act shall not be construed to apply to the sale, distribution, giving away, or dispensing of preparations and remedies which do not contain more than two grains of opium, or more than one-fourth of a grain of morphine, or more than one-twelfth of a grain of codeine, or any salt or derivative of any of them in one fluid ounce, or if a solid or semi-solid preparation, in one avoirdupois ounce; or to liniments, ointments, or other preparations which are prepared for external use only, except liniments, ointments, and other preparations which contain cocaine or any of its salts or alpha or beta eucaine, or any of their salts or any synthetic substitute for them; provided, that such remedies and preparations are sold, distributed, given away, or dispensed as medicines and not for the purpose of evading the intentions and provisions of this Act.

The provisions of this Act shall not apply to decocainized coca leaves, or preparations made therefrom or to other preparations of coca leaves which do not contain cocaine.

Retailers Stock Five Ounces of Five Per Cent Solution.

SEC. 8A. *Be it further enacted,* That no retail druggist or dealer shall have on hand at one time a stock greater than five ounces of cocaine or of tropa-cocaine, hollo-cocaine, novo-cocaine, alpha eucaine, beta eucaine, and if the stock on hand of any one

of said substances shall be as much as five ounces none of the other substances shall be kept on hand at the same time. Said drugs shall not be sold in the flake or crystal form, but in solution only, which said solution shall not be stronger than five per cent.

Providing Punishment for Violations.

SEC. 9. *Be it further enacted,* That any person violating any of the provisions of this Act shall be guilty of a misdemeanor, and on conviction thereof for the first offense, shall be punishable by a fine of not less than $50.00 nor more than $100.00, and for the second offense by a fine of not less than $100.00 nor more than $500.00, and by imprisonment for thirty days in the county workhouse. It shall be the duty of the Circuit and Criminal Court Judges of this State to give the provision of this Act in special charge to the grand jury, and the grand jury shall have and exercise inquisitorial power over any violation of this Act, and no prosecutor shall be required for an indictment against a person for violating the provisions of this Act.

SEC. 10. *Be it further enacted,* That all laws and parts of laws in conflict herewith shall be and the same are hereby repealed, and this Act shall take effect from and after January 1, 1914, the public welfare requiring it; provided, however, that nothing contained in this Act shall be construed to impair, alter, amend, or repeal any of the provisions of Chapter 297 of the Acts of 1907, or any amendments thereto.

Passed September 22, 1913.

NEWTON H. WHITE,
Speaker of the Senate.
W. M. STANTON,
Speaker of the House of Representatives.

Approved September 25, 1913.

BEN W. HOOPER,
Governor.

A true copy—Attest:
R. R. SNEED,
Secretary of State.

The Governors of the New York Skin and Cancer Hospital announce a course of clinical lectures and demonstrations in the Out-Patient Hall of the hospital on the following afternoons, at 4:15 o'clock:

"Syphilis," by Dr. Bulkley.

April 1—Primary lesions, genital and extra-genital—Innocent syphilis.

April 8.—Early manifestations of syphilis.

April 15—Late manifestations of syphilis.

April 22—Marital and hereditary syphilis.

April 29—Treatment of syphilis.

"Cancer," by Dr. William Seaman Bainbridge.

April 30—Some practical phases of the cancer problem.

The lectures will be illustrated by cases, models, colored plates, photographs, etc.

The course will be free to the Medical Profession, on the presentation of their professional cards. F. Haas,

Chairman of Executive Committee.

March 1, 1914.

"At a recent meeting of the Tri-State Medical Society of the Carolinas and Virginia, Dr. E. C. Register, who has been editor of the well-known Charlotte Meidcal Journal for twenty-five years, was elected President."

The Index Office which has recently been established in Chicago intends to make a specialty of serving the medical profession by undertaking to supply—

> Exhaustive or selected bibliographies of medical subjects, translations or abstracts of articles or monographs, copies, photographic or otherwise, of manuscript, printed or illustrative material.

Special attention will be paid to discretional research and investigations in the libraries of Chicago and other cities.

The office also intends to bring investigators in touch with the work of others in the same lines of research.

Located in the city of great libraries, the office will be in posi-

tion to undertake quite extensive investigations without going outside the locality of its headquarters. It is the intention of the Board of Trustees, however, to establish connections in the other great library centers of the world.

Dr. Baynard Holmes, surgeon and medical writer, is President of the office, Aksel G. S. Josephson, Cataloguer of the John Crerar Library, is Secretary and directing officer. The office is located at 31 West Lake Street, Chicago.

Sanitation in India.

Surely no country needs sanitation as does India. It was therefore that the writer felt like congratulating himself when he read of the meeting of the All-India Sanitary Congress at Lucknow, January 19-23, and here I was only a few miles away. During the time I was in India the health reports gave from five to six thousand deaths from Bubonic Plague a month. This, with cholera Asiatica and smallpox are practically always epidemic in India. During our recent visit at Bangalore we found that cholera, bubonic plague and smallpox were all epidemic. As if this were not enough, about twenty soldiers were bitten by a pet monkey and one of them died of hydrophobia and the rest were sent off to a Pasteur institute. All of this did not create as much excitement as I have known one case of smallpox to do in Cincinnati. Bangalore should be a healthy town. Four thousand feet above the sea level, it has a pretty comfortable climate. The hygiene in India is bad, absolutely bad. It is supposed to rain every Christmas here, but forgot this year, therefore the ever-present dust was more in evidence than ever. Underground drainage is unknown. The pail system for the disposal of the offal of the inhabitants is in vogue. Many of them have no pails. The water in many places is not fit to drink nor the food to eat, and dust, germ-ladened dust flying everywhere. What wonder is it that gray hair is scarce in India.—*E. S. McK.*

Indian Association for the Advancement of Science.

It has been the writer's good fortune to attend during the past year the American Association for the advancement of Science, and the British Association for the Advancement of Science. It was therefore with much pleasure that I noted that the meeting of the Indian Congress of Science was set for January 15, 1914, during my visit to India. This was the first meeting of this congress and was presided over by the Hon. Justice Ashutosh Mukerjee. The suggestion and preliminary organization of the Congress was due to Prof. McMahon of Lucknow Canning College and Prof. Symonson of the Madras Presidency College. The attendance was good and the Congress was established on a firm footing. It is hoped that it will continue to be a success and that it will be the means of much good in India, a country and a people so much in need of help. Among the many valuable papers presented I will take up your time and space with the mention of but two. Professor Jackson read a paper on forecasting the weather in which he made the claim that in fifty years we would as easily and surely forecast the weather for three months ahead as we do now for 24 hours. Mr. D. Hooper read on the Hot Springs of India and their medicinal value. The president's address was full of thought.—*E. S. McK.*

Bubonic Plague—Transmission.

A touching, teaching incident occurred in India recently. The little girl of the U. S. Counsel had a little pet, Don, an Italian greyhound. The little girl, Helen, was just emerging from babyhood to girlhood; the dog was just leaving his puppyhood. They made a lively pair. Don was young and tender and the fleas dearly loved him. One of his little mistresses daily duties doubly disliked by both of them was to wash Don free of flees. One day she had just about finished this task when with many a squirm Don broke away from her, dashed across the court and caught

a rat which he proceeded to chew and shake fit for an old rat dog. When through and his mistress was able to catch him again she found him again covered with fleas from the rat he had just killed. She proceeded again to wash him free from fleas. Some of the fleas to escape the bath jumped on her and bit her. Relating the incident to her mother, said. "This is the first rat Don ever caught. How in the world did he catch it." The daughter said: "It must have been a very old rat for it could hardly run." It was a rat hunting a quiet place in which to die of bubonic plague and the little girl was one of the frightful 80 per cent mortality from bubonic plague. This is one of the reasons why in India we see placarded how the rats carry the plague, and why, when a rat is found dead not from violence the health officer is notified, and the pathologist holds a postmortem to see if the cause of death was bubonic plague.—*E. S. McK.*

Medical Interne. Government Hospital For the Insane.

April 8, 1914.

The United States Civil Service Commission announces that senior students of reputable colleges will be admitted to the open competitive examination for medical interne in the Government Hospital for the Insane, to be held on April 8, 1914, upon filing applications showing them to be otherwise eligible, but in the event they attain an eligible average in the examination their names will not be entered upon the eligible register until they have furnished proof of actual graduation from such colleges.

Issued March 14, 1914.

Obituary.

Roswell Park, sixty-two, of Buffalo, N. Y., surgeon of world-wide note, and one of the four surgeons who attended President McKinley after he had been shot by Leon Czolgolsz, died sud-

denly at his home, February 15, from an attack of heart failure. Born in Pomfret, Conn., May 4, 1852, Dr. Park showed an early inclination to study medicine. He was the son of Rev. Roswell Park and Mary Baldwin Park. He received his degree of bachelor of arts in 1872, at Racine College, Racine, Wis., an institution founded by his father. Later he won a degree of master of arts and was graduated from the Rush Medical College in Chicago.

Dr. Park's first professional effort was teaching. He accepted the appointment of demonstrator in anatomy at the Woman's Medical College, Chicago. He held this position from 1877 to 1879, when he was called to the Chicago Medical College to take the chair of adjunct professor of anatomy. He taught there until 1882. In 1880, Dr. Park married Martha Durkee, of Chicago. After her death, in 1889, he traveled abroad, his aim being to get a keener insight into surgical and medical affairs. Dr. Park, in going to Buffalo, was made surgeon of the General Hospital, and in 1910 became chief surgeon, an office which he held until death.

Dr. Park had held executive offices in leading medical and surgical societies of the world. He was a member of the French, German and Italian surgical societies, a rare distinction. He was a former president of the American Surgical Association, former president of the Medical Society of the State of New York, and at one time president of the American Association for the Advancement of Science. Among the other offices he held were: Non-resident professor at Army Medical College, Washington; first lieutenant in Medical Reserve Corps, United States Army, and surgeon of the Fourth Brigade, N. G., New York, from 1884 to 1893. He was a former president of the Buffalo University and Saturn clubs, a member of the Park Club and a life member of the Buffalo Fine Arts Academy and the Historical Society. He belonged, too, to the University Club of New York, and the Army and Navy Club at Washington.

Dr. Park was a many-sided man. His interest in music was dominant. He took an important place in the musical life as soon as he made Buffalo his home. Piano composition was his one

great recreation. All of his selections reveal musical genius as remarkable as his surgical dexterity.

His interest in science did not stop at medicine, however. He delved into all the sciences, and possessed a knowledge of physics and chemistry infinite enough to warrant his accepting a chair of either subject at a university. His knowledge of radium and its utilization was authoritative. In fact, for many years he was the possessor of the only radium in Buffalo.

On the question of cancer, Dr. Park was just as great an authority. He founded the Gratwick laboratory and was instrumental in starting the state institution for the study of malignant diseases. He was head of the board of trustees of this institution for many years.

As an author, Dr. Park was known in the medical profession of ten nations as a most tireless worker and writer in the cause of surgery. His first book was a compilation of lectures delivered at Philadelphia, entitled "Mutter Lectures." This appeared in 1891. His second work was "Lectures on History of Medicine," delivered before the University of Buffalo and published in 1895. In 1896 came "The History of Dentistry," followed by "Surgery by American Authors" in 1896. By far the greatest work, however, is "Modern Practice of Surgery," a 1,200 page volume published in 1907. Dr. Park's last book was called "The Evil Eye," a series of essays published in 1913. *-Lancet-Clinic.*

Book Notices and Publishers Department omitted from this number on account of press of matter.

NASHVILLE JOURNAL
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MEDICINE AND SURGERY

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Original Communications

THE PHYSICS OF LIGHT AND THERAPY.

By T. D. CROTHERS, M.D., Hartford, Conn.

The recent discoveries in regard to the ultra violet rays and the perfection of the micro-photographic camera with its rapidly moving, sensitive films has carried the limits of vision of the human eye into a very wide and unknown region.

Literally, it has opened a new universe of activity as wonderful as that seen by the telescope in the sidereal world above us. Particles of matter, molecules, and a vast world of atomic bodies invisible to the naked eye, through the ordinary microscope, come into view, and are seen to be in a state of incessant activity.

This molecular world is a mass of atoms moving with intense velocity in all directions, forming and reforming, in an infinite variety of geometrical shapes and figures, crystalizing, breaking down and building up again; and through it all there seems to be some plan or purpose, suggesting the presence of laws and constituting a new continent of physical forces that will require centuries of observation to explore and understand.

This microscopic universe, with its vast possibilities, suggests that a study of light with the newer appliances may not only carry the vision of the human eye far beyond the narrow bounds of the

present, but may open a new field of therapeutic forces, beyond anything that we can at present conceive.

In the commercial world, light from the sun and from the electric currents have come into prominence with possible powers and practical utilities that suggest an enormous possible field for use in the future.

Already the phenomenal effects, both physiological and commercial, from light and electric currents, indicate how much there is before us, and that we are on the very borders of a new world of discovery.

As in all other efforts to explore the unknown, there must be some theories which, as guideposts, will assist the explorer to see the road, and understand something of the movement and direction of the forces.

Hence, theories are essential as a framework, or as mountain peaks, from which peaks we can make measurements, and date the grouping of facts in our study of the wide ranges of the unknown about us.

When such theories are supported by a great number of facts that explain the phenomena in a satisfactory way, they become practical aids in the clearing up of the mysteries, and pointing out the laws which govern and control them.

The physics of light, which still in a theoretic stage, has attained a degree of prominence and certainty, from the vast number of facts on which it is based, and its theories describe conditions and realities most probable from our present knowledge.

Long ago Newton and others conceived that all light was the projection of minute particles of bodies that became luminous when thrown off with intense velocity as from the sun or other bodies. Such bodies were either luminous or made so by their tremendous velocity.

They came to the earth like a veritable rain or shower of molecules. He also explained that radiated light coming from bodies previously dark was simply the disturbance and liberation of energies stored up in the molecules and given out in streams of great volume.

These theories were accepted for a long time, and studies of

what the particles were, comprised the subject of many exhaustive inquiries, in which the difficulties increased and the explanations became more obscure.

Finally, Faraday, Tyndall, and other noted authors, concluded that light must be a wave motion, and not the projection of invisible foreign bodies. They asserted that light, heat and electric currents were simply forms of motion, which differed in vibration, wave length and velocity, and their effects on objects were transformations into heat, light, and other manifestations.

The suns rays coming into the earth's atmosphere become transformed into heat, into electricity and different forms of motion. This theory is now accepted and gives the clearest explanation of these various agencies, and is supported by an increasing mass of facts and observations.

Thus the light waves from the sun do not reach the earth, but in passing through the atmosphere of the earth, break up into heat, electric currents and other unknown agencies.

The atmosphere of the earth is a mass of invisible particles and molecules which are thrown into intense vibration by the light of the sun. This forms heat, and clouds and vapor are generated with electric currents.

Meteorology is a study of this vibratory activity of heat, vapor electrical currents and their incessant movement.

When the light waves reach the earth they are found to be limited to a single octave, visible to the naked eye and represented by the colors of the rainbow. This octave begins with the red, whose waves are the longest, and ends with the violet, which has the shortest wave lengths, and these are all measurable with exactness.

Beyond these, there are great numbers of other wave motions stretching out from the red ray on one side, and from the violet ray on the other. On one side the waves are of increasing lengths, and on the other they are decreasing.

Beyond this luminous octave, there have already been traced over sixty series of radiated light in which the wave lengths and some of the physical properties can be determined.

The eye is only fitted to recognize these vibratory waves of a

single octave, where the rapidity is limited to from five hundred billions to seven hundred billions per second; and beyond that, nothing is visible. This is analagous to the limitations of the ear, which can only recognize as sounds, vibrations within the range of from 32 to 36 thousand per second; beyond this all is silence.

Light produced by electrical appliances extends over hundreds of series of octaves, of which only a few have been recognized and analyzed and grouped. Some of them are luminous, others are not, or are only made so by the application of some particular stimulus.

A wonderful field of discovery awaits the investigator in this direction. In a study of octaves of vibrations visible to the senses, as light, it has been shown clearly that different waves have different physiological actions on the body, and they can be transformed, neutralized, diverted or cut out altogether.

Some of the light waves can be greatly intensified in their volume, or made destructive, breaking down and changing the tissue which they fall upon. Others can be blended, cumulated or neutralized and their direction and force changed. All light waves are readily transformed into heat, and this is the chemical action so prominent in many cases.

In plant life this chemical action is constructive, changing the gases from one media to another, polarizing and adding new substances; thus all plant life is the transformation of light and heat waves into substances.

Iridescence is the name given to the color effect seen in precious stones and other objects, and represents a blend of the various colors, eminating from the action of light vibrations on the subject.

Light falling on the irregular surfaces is radiated according to the plane, or neutralized and blended and given out as a complex of the various waves.

Fluorescence is a name describing the condition of bodies giving out luminous waves. This may be the result of breaking up the molecules, and the liberation of certain energies which appear in vibrations. Such bodies may have absorbed and cumulated light waves and held them in a non luminous form, until

from some particular causes the atom breaks up and the bonds which have held them liberate the transformed waves back to light vibrations again.

Phosphorescent bodies are of this class, so also is radium. Light has been stored up, and is released from the compact in response to some agent. Why may not the same thing occur in the action of light on the body, where the wave energies have been stored up in cell and tissue, and are released by the action of similar waves of energy? This is not at all improbable.

Some very curious incidents have been reported of the fluorescence of the body, noted in luminous waves emanating from it. Some of these incidents are described as following from the effects of electric currents, or the sunlight on the body.

Going into a dark room, photographs have been taken of the body after this exposure there. It is very evident that light can be stored up in the animal tissue, as well as in mineral substance, but so far we have not scientific studies that clear up this subject with any kind of exactness.

We are all familiar with the vibratory effect of the sunlight on the air, and the constant liberation of vapor from the surface of the earth, of its absorption and condensation, and the electric currents which follow from this active change, as well as the changes of nitrogen and oxygen, going on in the upper air. This same vibratory action occurs in the animal and vegetable kingdom, and is simply forms of motion, of varying intensity and activity, in which the molecules and the ions, both vegetable and mineral are in process of incessant change, gathering and breaking, forming and reforming, like the atoms of the invisible world, of which the microscope only gives us a faint intimation.

The effects of the different rays of light, both in the solar spectrum and the electric current, produces stimulation, depression and destruction and transformation of the energies, into most complex conditions. All this has a physiologic, and therapeutic action, which we scarcely yet can conceive of.

So far we have been able to sift out and direct these waves according to certain crude conceptions, in which there is no doubt both beneficent and destructive activities. We can control these

currents so that they can become energetic, and increase the brain and nerve vigor, or diminish the disease tendencies, and destroy germ life, and in many other ways have a decided therapeutic efficiency.

The electric wave currents, both luminous and non-luminous, are simply wave energies, vibrations, which we can understand in some slight measure, and when compared with the rays of the sun, seem to differ only in intensity and volume.

Heat rays from both the sun and electric forces are transformations and utilizations from obstruction, chemical obstacles and many other tendencies. While the short waves are destructive and corroding to certain animal growths, they have a certain chemical action on microscopic particles and gases.

We can now assert with some positiveness that these short waves, as in the X-ray, ultra violet and radium can take the place of the surgeon in eroding tissue, destroying harmful germs, and giving new power to the body, promoting its metabolic changes in many marvelous ways.

It is also evident that many of these vibratory waves may be made to pass through the body, distinctly influencing all cells and tissues, while other waves are absorbed and transformed on the surface. Some of these transformed waves become heat up to the point of corrosion; others increase the perspiratory glands, while others diminish sensations, stopping the vibrations of the body.

There can be no doubt that invisible waves of electric energy fill all space and in a state of incessant activity in which the body is tremendously impressed, also that these complex wave energies follow certain fixed laws which are responsive, obstructive, stimulative to increase or depress the physical energies of the body.

Cell life, organic and inorganic particles, ions and the smallest possible atoms of matter are all moving in obedience to this vibratory action, storing up, absorbing forces, utilizing them, giving them out by attraction or repulsion, and in almost infinite ways following in obedience to lines of laws and forces unknown.

It is this vibratory action that we may control, increase or diminish, depending upon the knowledge and the application of

exact means to ends. We realize that we can increase or diminish the arterial tension by light or electric currents, that new force and impetus may be given to the protoplasmic molecules, and that the movement of the fluids in the body may be markedly changed.

Every practical student notes the specific changes coming from the sunlight, and how they can be varied, transformed and made therapeutic. In much the same way the electric current has a very startling effect when directed by experience and observation, and this is only the beginning of a vast unknown field of therapeutic possibilities.

The carbon arc lights project an assemblage of wave lengths of certain intensity and power, with a distinct physiological action.

The incandescent lamp gives another range of wave vibrations, wanting in some agents and prominent in others, less efficient because of the glass globes surrounding them, but marked in certain effects.

The radiant light bath pouring on the body certain distinct vibratory activities, is followed by intense stimulation of the sweat glands, diverting the blood to the surface and producing many other effects equally marked. In all this there is literally a bombardment of the body with vibratory waves which are transformed into heat, absorbed on the surface, or passed into the interior of the body, rousing up new activities, neutralizing or controlling old ones.

All electric currents are the same, changing the activities of the body, both on the surface and in the interior. This is the physics of light. The eye is provided with protective muscles to cut off and diminish certain vibratory rays, and transfer, or neutralize their effects, and yet the eye is dependent on these vibrations for its development and perfection.

The color effects which the eye can appreciate and determine, and which are developed into artistic effects, such as great paintings, are the direct results of the stimulant action of these vibrations. It is the beneficent action of these motions, and their peculiar physiological effect, that build up and strengthen. Another class of vibrations are destructive.

The short ultra violet waves, unless controlled and regulated would soon destroy the eye. Along these lines are some very remarkable experiments in the commercial world, to determine the quality and character of light waves that will bring the highest efficiency to the sense of sight, and produce the best economical effects as illuminants.

In much the same way sound waves that rouse the anæsthetic sense and develop musical culture, may act in the most healthy, stimulating way, finally develop into great harmonies of classic music. On the other hand vibratory sounds of a different character may destroy the sense of hearing, and the cell responsiveness.

Electric lights and currents are forces that can act in the same way, curing or injuring the body, raising it up,ordestroying it.

Death from a stroke of lightning is simply an immense volume of intense short vibrations passing through the body with such activity as to suspend all motions and movements at once. Where evidence of burning appears, these short rays have been transformed into heat. When the current strikes a house the obstruction to the waves changes them to heat and combustion follows:

Great volumes of electric currents pass from the clouds to the earth, repeatedly, without causing destruction, or being converted into heat. The rapidity with which they pass through the air leaves a vacuum into which the air rushes, producing the sound of thunder.

It is the obstruction of these vibratory waves that produces transformed effects. Electrolysis is the dissolving of chemical compounds by the electric currents, and where this takes place on the surface of the body, as in cataphoresis, the molecules of the substance are forced in, carrying with them electrical powers, which have a therapeutic action.

This is verified in many practical ways, and the physics of it is that the vibratory waves may be used to force into the tissue molecules and ions of a great variety of agents. The erosive qualities of the electrical currents may be illustrated by the erosive action of sand blasts, where mineral particles are driven with great velocity against the obstacle, eroding it in a most pronounced way.

This gives some idea of light and the electric current, whose

intense vibrations not only breaks up the natural movements of tissue, but very likely forces atoms or ions into the substance where it is transformed and changed to so-called stimulants and tonics.

The polarization of these wave energies into positive and negative poles and their rushing together with frequent attractions and repulsions are all forces with physiological action, and yet acting along purely physical lines.

Why the space between two poles should be made luminous by the attraction of opposite currents of vibrations, and the interchange of these great forces and powers that are in some degree measurable, transformable, and are already utilized, are questions which awaits the future.

The various machines for the generation of currents and electric lights and the great variety of interrupted currents that can be diverted, intensified and changed, are all appliances to increase the physical efficiency of both the long and short waves and concentrate their activity where it will be of the most advantage.

In the commercial world this energy is turned into power to drive machinery and do practical work, or is turned into heat and luminous rays and made to transmit sound over receptive wires, or produce vibrations in the upper air, which are interpreted at long distances.

The physics is the same of the light and electric currents in the body. The microscopic universe where cell life and molecular changes are going on, are all in obedience to the same vibratory activities, and the same laws of the transformation of energies.

The smallest bodies known, called the ions, together with the atoms and molecules, respond to these activities, are both obstructive and destructive and act to build up and tear down by the same laws and under the same conditions.

There is one fact of great significance at present, that is, the tremendous obstacles to be overcome in utilizing these forces and preventing the enormous waste of power that at the present time attends our efforts. Thus, where electricity is put to service as a power producer, only a small per cent can be made available. The rest is lost, scattered, absorbed and transformed through the fault

of the apparatus. In the same way the current that is transformed into heat and light, is attended with enormous loss, so much so, that it makes its utilization so expensive that it has not some into general use.

This vibratory force has not yet been transformed and utilized to its fullest extent. Electricity as an illuminant is still a great problem, for the same reason: the enormous loss of energies that can not be transformed into light waves.

Much the same difficulties confront the therapeutic use of these vibratory energies, in electric light and currents, but this is being rapidly overcome, and every year brings new advances and new solutions that approach the ideal.

In some degree the same difficulties prevent the use of solar light from being harnessed into the service of therapeutic power. Of course the loss here is not to be considered, but how to secure the greatest efficiency with the least peril is the problem.

In regard to the electric light, the vast number of transformers, accumulators, and various means of intensifying the current, controlling the wave lengths, increasing its volume, and diminishing the current, all show intense activity that promises possibility of turning these energies to a practical account, so as to make them available in every physicians office in the country.

Some very interesting studies have been made of bodies which are called electrolytic. It is assumed that these bodies have the power of absorbing electric waves and holding them in some form, awaiting the proper stimulus before liberation.

Chemical molecules of the mineral world are supposed to have this particular absorbing force, and thus become conductors and transformers of these activities. They are supposed to be receptive and responsive, and are called radium ions, the latter term used to designate the possibility of their ability to travel and carry with them the forces which they have received from without.

Certain waters are supposed to contain these radio ions which are given out from heat or some other active cause, and the results are of course both remarkable and startling. These are, no doubt, physical forces of light, bottled up and carried around, liberated or retained, and when meeting the agent to which they

respond, they are absorbed and become vivifying. This is another field of physics, which we are just on the borders of.

There are some conclusions which a study of the physics of light bring into prominence more as outlines for further research and confirmation. First, the use of the sunlight with its limited assemblage of color waves promises a very extensive field of therapeutic power in the treatment of disease.

It is evident that this agent can be made of tremendous efficiency in destroying germs, increasing the activities of the body. It is also clear that light passed through screens or glasses may be changed, and subject to a great variety of new uses and forces which only an exact knowledge and practical experience can demonstrate.

Second, the electric radiant light, while more complex than that of the sunlight, is richer in vibrations of short waves that can be used to promote physical efficiency, break down abnormal growths, check disturbance of forces and equalize the activities of the body. This includes both luminous and non-luminous rays, some of which are very harmful. Others are dangerous to germ forces, and in all there are immense possibilities of changing cell life, cell growth and nerve activities.

There is probably no therapeutic power of greater value in diseases of the brain and nervous system than that of the electric light and electric currents. It is no wild dream of the enthusiast to assert that the electric wave vibrations are the best representations of vitality and life that we know of, and that its possibilities in checking disease, lengthening life, producing efficiency, are unlimited.

There is nothing in the therapeutic world that can approximate it in certainty, accuracy and remedial power and force.

Third, the physics of electric currents and light indicates the necessity of generating the light and the current in the very best possible media and surroundings, free from dust, from external contaminating, microscopic molecules.

As in the production of sound, highly polished varnished pianos, embellished with ornaments and used in luxurious rooms, always suffer in tone, harmony and melody. This is because the vibra-

tions of sound are interfered with, neutralized, crossed and disturbed. Hence the quality of the tone is lowered and made more imperfect.

In much the same way the value of electric lights and currents may be greatly diminished and lessened by the effects of the atmosphere and surroundings. Its penetrating powers may be shortened, and its intensity and volume dissipated and transformed, depending on the obstruction which it meets in the surroundings.

The future electrical machines will be of the simplest character, devoid of ornaments, operated in the purest atmosphere, and on lines of control that can be regulated with mathematical exactness.

Fourth. A final conclusion of great significance appeals to all of us. Our books and writings while full of facts that are both startling and suggestive of tremendous possibilities in the future lose much of power and value from want of reference to the physics of electric currents and light.

The terms used to describe these complex and intricate energies, and their movements give no idea of the physics. They are literally a description of the physiology without any mention of the anatomy, or in other words, it is like exploring a new country without any reference to the starting point or a well defined base.

The minute descriptions and analysis of the currents generated from machines and their different actions on the body without any idea of the physics or the meaning of these forces, or the theories which explain their action, are a loss, and result in vagueness, uncertainty. What we all need is some clear conception of the physics of the agency we are describing, and this becomes the starting point from which to compare, arrange and formulate some of the great laws which control these agencies.

Our work would assume larger and clearer proportions if we could have a well defined basis and definite conceptions of the forces that we are dealing with. This paper is offered as a contribution to this particular phase of the subject, and as an effort to attain for our future studies a better understanding of the physics (no matter how theoretical it may be), of the energies

we are dealing with, and to establish some central facts from which we can go on with more certainty.

Among the many works, which not only indicate the need of this study, but suggest lines of research and paths that will lead to more distinct realization of these forces may be mentioned, Radiation, Light and Illumination, by Prof. Steinmetz; Light Therapeutics, by Dr. Kellogg; Therapeutics of Radiant Light and Heat, by Dr. Snow. These are of the most advanced and suggestive studies. Other works of equal value bring us to the borders of a great undiscovered country full of therapeutic possibilities, more wonderful than any present commercial use of these forces.

Proceedings of Societies

TRANSACTIONS OF THE CLINICAL SOCIETY OF THE NEW YORK POST-GRADUATE MEDICAL SCHOOL AND HOSPITAL.

(Stated Meeting, January 16, 1914, the President, John J. Moorhead, M.D., in the Chair.)

"Etiology of the 'So-Called Hemorrhagic Disease of the Newborn:' Treatment by Subcutaneous Injection of Whole Blood."*—By O. M. Schloss, M.D., New York.

There have been many theories to explain the hemorrhage which may occur during the first two weeks of life. There are two general conditions which are of importance—bacterial infection and syphilis.

From the beginning of the era of bacteriological research microorganisms were described as the causative agents of hemorrhage in the new-born. The first report was that of Klebs in 1875, and during the next few years different observers isolated practically every known pathogenic organism from infants dead of hemorrhage. In some instances the bleeding was ascribed to specific hemorrhage-producing organisms which were capable of causing hemorrhage when injected into animals.

A serious objection to many of the bacteriologic examinations arises from the fact that the organisms were isolated on postmortem examination often made twelve to twenty-four hours after death. The presence of the bacteria could have been due to postmortem invasion.

There is little question, however, that many cases of hemor-

*Abstract of remarks delivered by invitation before the Clinical Society of the New York Post-Graduate Medical School and Hospital, January 16, 1913.

rhage in the new-born are due to bacterial infection, but there is great need for intra-vitam blood cultures before we can acurately determine the proportion of cases due to such cause.

The relationship of congenital syphilis to hemorrhage in the new-born was at one time the cause of considerable discussion. The question disputed was whether congenital lues acted merely as a predisposing cause or could be the direct cause of hemorrhage.

Time does not permit a consideration of the conflicting opinions but the evidence indicates that syphilis is surely a predisposing cause and in some instances, at least, is the sole determinable factor.

There are certain local causes of hemorrhage in the new-born, the most important of which are gastric or duodenal ulcers. A number of cases have been reported in which the hemorrhage was undoubtedly due to such ulcers.

In addition to the mentioned causes, the ultimate cause of the bleeding must be sought in some abnormal condition of the blood or vessels. It seems possible that in some cases the bleeding may be directly due to some insufficiency of the blood or vessels.

In connection with Dr. Commiskey, of Brooklyn, I have determined the coagulation time of the blood in these cases but with no constant findings. In some instances the coagulation time was normal, in others it was slightly delayed, while in four cases coagulation was entirely absent. From our present knowledge the cases may be divided tentatively into at least two groups. In one group there is a general bleeding tendency. The coagulation time is greatly delayed or absent and any wound of the skin gives rise to continued bleeding. In these cases it seems only rational to believe that there is an absence or interference with the action of some substance essential to proper coagulation of the blood. In three cases of this type which were examined by Dr. Commiskey and me there was an apparent absence of thrombin or fibrin ferment. In a similar case investigated by Whipple the same condition was apparent.

In the fourth case there was no deficiency of thrombin, but the delayed clotting was due to a deficiency of fibrinogen. In a second

group of cases, there is little, if any, delay of blood coagulation and the hemorrhage is restricted to certain areas. Moreover, punctures of the skin do not give rise to hemorrhage, but the bleeding is quickly checked by the formation of a firm, well retracted clot. In these cases it seems only rational to assume that the bleeding was due to a lesion localized in the areas from which the bleeding occurred.

The most promising line of treatment at the present time seems to be the use of human blood or its derivatives.

A number of successful transfusions have been reported and were it not for technical difficulties this should prove the ideal method. Transfusion of a new-born infant, however, offers considerable difficulty and requires the services of a skilled surgeon. If the method of indirect transfusion devised by Lindeman proves applicable to infants this may prove the ideal method.

Human blood serum has been used with great success by Dr. Welch.

Dr. Commiskey and I have treated a number of cases with injections of whole human blood. The blood was quickly withdrawn from the vein of a parent and immediately injected into the subcutaneous tissue of the infant before clotting could occur. Twenty-six cases have been thus treated with a mortality of fifteen per cent. These statistics include, however, all cases, several of which died within a very short time after coming under observation and one case after a single injection. Cases are also included in which the fatal outcome was not due to hemorrhage, but to the underlying disease. If such cases were excluded the mortality would be less than five per cent.

We have found that the blood is quickly absorbed, in some instances within two hours and always within ten hours, even though 15 to 20 cc. had been given.

The blood does not clot in the tissues, but remains fluid until absorbed so that any objection based on the fact that there must be absorption of the blood clot, is without foundation. We have given test injections of 30 cc. of whole blood to eight very feeble infants, marantic or premature. In no instance was there any deleterious effect based on careful observation of the weight,

pulse, respiration and temperature and a careful examination of the urine.

This method of treatment has been used by others and in no instance was there any evidence of a harmful effect from the injected blood.

I feel that the ideal method of treatment is by the transfusion of blood either directly or indirectly. Where this is not possible there is little choice between the use of blood or serum. Of one thing I am certain and that is, that the injection of whole blood is harmless. Whether this method will prove as efficacious as the use of serum depends entirely upon accurate statistics by impartial observers.

The use of whole blood offers one advantage, that it can be used immediately and requires no apparatus save a needle and syringe.

Dr. John E. Welch spoke on "The Use of Human Blood Serum." This paper will appear in another publication.

Dr. Edward Lindeman spoke on "Indirect Transfusion." This paper will appear in another publication.

Abstract of Discussion.

Dr. Pisek: The application of this work to children's diseases promises to be epoch-making in the field of therapeutics, but in spite of what we have heard tonight there is still a great deal to be learned and the field is just beginning to be scratched. I am glad that the program has gotten away from the topic of hemorrhagic diseases of the *new-born,* for the application of this type of therapeutics is much wider than to that class alone. Not more than about one in one thousand new-born infants have this hemorrhagic dyscrasia, but when formerly we met this condition, the prognosis was considered invariably bad. From 70 to 80 per cent of these cases died, in spite of the use of gelatin, adrenalin, calcium lactate, etc.

That this work is quite new, is attested by the fact that an examination of most modern text-books reveals little or nothing on

the subject. The text-books still refer to the use of gelatin, adrenalin, etc., which we know are quite ineffective measures. My own experience with infants treated with these drugs just mentioned was that they quite uniformly died.

What are we to say about these different methods and their practical application in the diseases of infants and children? As a partial answer, a brief recital of a recent case may be interesting. The patient was a child a day old, brought down from the country to the hospital in an automobile. It had hemorrhages from the bowel, and the little one almost died on the way down and was considered about dead when it reached the hospital. The nurses had to work hard to keep it alive. Before we could secure the blood from one of the family an injection of horse serum was given; soon after (three hours), the father was brought down, so that an injection of the whole blood could be given. This injection was made, the hemorrhages stopped, and the child recovered. When the whole blood was given, blood was collected in a flask and kept for the serum, and held in reserve against further bleeding. In other words, we used horse serum—a foreign serum (the best we could get in the quickest time); we injected the whole blood from the parent; and we had his blood serum in reserve.

This is something practical that has been brought out by these different methods; apply the method we can get hold of or the one readiest at hand and use it. Dr. Welch's method commends itself by its simplicity, but it requires the element of time in securing the serum—that is the only thing that would detract from its use; on the other hand, Dr. Lindeman's method, in his own hands, is admirable and will do the work. From the technical standpoint, whether others can do it as well, remains to be seen. We know, however, that any doctor can extract a syringe full of whole blood and inject it quickly into the new-born, and so hold it over until we can secure some blood serum.

In the practice of pediatrics, we are constantly meeting children with diseases which need the use of whole blood, as Dr. Lindeman has shown tonight. When the first article on this subject appeared, I had great belief in it and hoped that we would be able to utilize the method, and to inject serum in cases of purpura

hemorrhagica, and other vascular dyscrasias. Dr. Lindeman used his method in this hospital in a case of secondary anemia in a child about three years of age, that was absolutely blanched, hemoglobin 30 per cent, and in about twenty-four hours the little one was running about on the roof garden, and left the hospital with a hemoglobin of 75 per cent. This seems like a miracle, and therefore I say the work is epoch-making. We should thoroughly familiarize ourselves with it and be ready to employ it when the emergency arises.

Dr. Halsey: In discussing the application of these new methods for the treatment of hemorrhagic conditions, there is danger that the simpler methods, which have hitherto been relied upon, may be entirely overlooked and their value underestimated. In many cases where the procuring of either serum of whole blood may be impossible, the saline bowel irrigation by the drop method or the intravenous infusion may give excellent results. Therefore, these methods should be kept in mind so that you may obtain results even though you may know of other methods which are preferable.

It is not my wish to enter into a discussion as to which serum or whole blood is the preferable method, for, I believe, each has its own field. Each method has rendered excellent service in the control of hemorrhage, improvement of the cell count and the improvement of the percentage of hemoglobin. In conditions where the loss of blood volume and this alone is the crisis to be met, one can readily understand that the improvement may remain permanent, but in conditions where the loss of cells or their hemoglobin content is the difficulty to be overcome it is not easy to explain how the improvement may become permanent. In so-called pernicious anemia we see improvement under most any form of treatment and later there occurs the relapse. The ultimate effect of these injections of serum or whole blood in such diseases is such an important question that I hope it will be fully discussed.

Dr. Martin Rehling: We have just heard three very valuable articles on the subject of transfusions of glood in various diseases, and have fortunately gotten away from the rather limited field of

hemorrhagic diseases of the new-born, the subject of our program, for my experience with that condition is nil. I have had some experience with Dr. Welch's method of the injection of serum, and apropos of the case he reported, I would say that I think in all these cases of severe jaundice it is not only wise but it is our duty to inject blood or serum in some manner. I have had a number of cases of severely jaundiced patients who were injected before operation, in which bleeding has not occurred. I have had no hemorrhages in cases where I have tried it, and I am very much pleased with the results from this method. Of course the patients must be given serum before the operation as well as after operation.

Dr. Schloss's method of the direct transfusion of blood is so simple that it will always be ready to our hands, we can do either a saline infusion, or we can inject a little blood and then a little later, if need be, we can give serum by the Welch method.

I am very anxious to see Dr. Lindeman's direct transfusion. We have not been altogether satisfied with direct transfusion as we have employed it because of the difficulties involved, the time consumed in preparing the patients and the time consumed in the transfusion itself. Dr. Lindeman uses a number of syringes which he washes successively. That method is not understood by all of us, and I hope that some time he will demonstrate it to us, so that we can all learn it and try. I have myself employed the Soresi method with a great deal of satisfaction, and lately I have used one large syringe and liquid albolene for a lubricant and preventive of clotting. I have found that I could delay clotting in large syringes for a considerable time by this method. Dr. Lindeman's article is full of observations that need much thought, and I should like very much to know something more of the method.—*The Post-Graduate.*

Selected Articles

THE USE OF CAMPHOR IN PNEUMONIA.

By Otto J. Seibert, M.D., Cincinnati.

Sir William Osler, in his "Practice of Medicine," as late as 1912, in speaking of the mortality of pneumonia, says: "The statistics from my clinic at the Johns Hopkins Hospital from 1889 to 1905 have been analyzed by Chatard. There were 658 cases with 200 deaths, or a mortality of 30.4 per cent. Excluding 35 cases of terminal pneumonia, the percentage is 26.4 per cent. Greenwood and Candy in a study of pneumonia statistics in the London Hospital from 1854 to 1903, a total of 5,097 cases, conclude that the fatality of the disease has not appreciably changed in that period. In comparing the collected figures of these authors with those from other hospitals, there is an extraordinary uniformity in the mortality ratio. Between the ages of twenty-one and thirty the mortality is everywhere 20 per cent. Between the ages of thirty-one and forty, 30 per cent, and thereafter each decade it rises until above the age of sixty, more than half the persons affected die."

These figures certainly do not show any appreciable progress toward the reduction of mortality by the usual fresh air, expectant treatment.

Being a disease of infectious origin, in which the bacteria enter the blood stream at the time of the initial chill and remain there until the crisis has passed, and there causing the toxemia and the life danger and death of the patient, the successful treatment of pneumonia must eventually resolve itself into a serum therapy, as has been the case in diphtheria and tetanus and other bacterial infections, or into chemotherapy, i. e., destroying the pneumococcus directly or destroying its vitality in the blood stream and thus preventing further toxin formation.

As for serum or vaccine therapy, truly much has been done in this direction and much has been added to the literature, especially by Roemer, Rosenow, Flexner and Cole, but as yet we have arrived at nothing definite in the specific treatment of true lobar pneumonia. Many series of cases have been reported, treated with the various anti-pneumococcic serums and vaccines, but in all of them we see little change clinically as compared with cases treated with the ordinary expectant method. They all end by crisis and never before the fourth or fifth day. Statistics do not show any vast reduction in mortality.

As for the chemotherapy of pneumonia, up to the present time, more has been done with camphor than with any other drug. The very common statement that the camphor treatment of pneumonia has been tried out long ago and without result is not based upon fact, for not until 1909 is there any record in the literature concerning the use of camphor to combat the toxemia of pneumonia. Previous to that time camphor was used in pneumonia, directly only against heart weakness, and its use started only after this condition had set in, and then in ridiculously small doses. According to Dr. Head, Professor of Medicine at the University of Pittsburg, and to Dr. Clyde, Professor of Pharmacology, in their report on the "Action of Camphor on the Heart" (Journal of Medical Sciences, February, 1913), camphor has no action on the heart. Their report states: "It should neither be relied upon as a cardiac stimulant nor should it be feared as a toxic, having injected it subcutaneously in doses as large as fifty grains in a series of adults from sixteen to seventy years of age, with no apparent action on the heart."

In the Munchener Woch. Med. Zeitschrift, No. 36, 1909, appeared a report by Dr. A. Seibert, of the Polyclinic, New York, of a series of cases of lobar pneumonia treated with hypodermic injections of large doses of 20 per cent camphor oil (10 c.c. to the 100-lb. weight). Later in the New York Medical Record, April 20, 1912, he added to that series, making a total of thirty-seven cases with only one fatal issue. This record not only shows a practical 100% recovery, but also shows that these recoveries can, with almost a certainty be attributed to the action of the camphor.

Let me quote Dr. Seibert: "These camphor injections invariably reduced the toxemia gradually until practically normal conditions were reached, three to four days after the first injections, while the alveolar exudate remained to be absorbed later on. This phenomenon and the absence of a crisis was noticed in every case." To obtain these normal conditions on the third or fourth day in thirty-seven consecutive cases, especially without a crisis, we must have some outside agent acting, and it is only reasonable to attribute this action to the camphor. He has supported these clinical observations with ample, careful biological experiments by Dr. Henzel, of the German, and Dr. Rueck, pathologist at the St. Francis Hospitals, New York City.

These experiments consisted of inoculating rabbits of known weight with fatal and double doses of pneumococcic broth, and injection of camphorated oil six hours after the inoculation. The experiments proved conclusively that the fatal issue of the inoculation could be delayed or prevented by the injection of the camphorated oil subcutaneously. Of the experiments the report says: "We find that in seventeen of the twenty animals inoculated with the fatal dose of pneumococcic broth, death was retarded from two in five days in eight cases, and entirely prevented in nine." Dr. Henzel, pathologist at the German Hospital, New York City, in 1909, reported a series of experiments made at Dr. Seibert's request, and demonstrated that when camphor, .0001 part, was added to the usual culture medium, the growth of the pneumococci was inhibited, while the controls all thrived.

Comparing the experiments with the clinical observations, we must bear in mind that the animal's blood becomes inoculated at once with a fatal dose of the broth, which already contains unknown quantities of toxins; that is not the case in the patient with lobar pneumonia, especially if seen early.

A few important facts stand out prominently in both the clinical observations:

1. That 10 c.c. of 30 per cent camphor oil to the 100-lb. weight, injected hypodermically, every eight to twelve hours, does not produce toxic symptoms.

2. That these doses assist in overcoming the toxemia of pneumonia.

3. The earlier the camphor is used the better the results.

Since the time of these publications there have been many enthusiastic followers of this method of treatment and many encouraging results added to the literature, not so much in our own country as in Europe, especially Germany. But in all cases, with few exceptions, the action corresponds with that originally reported, namely, "the favorable action of the sensorium, the reduction of the toxemia, the gradual arrival at normal conditions three or four days after the first injection, the absence of a crisis, and the exudate in the lung resolving at a later date."

It may not be amiss to here briefly mention a few of the more recent results of work in this direction by other men:

Dr. Wm. Cruikshank, Brooklyn, N. Y. (in the New York State Journal of Medicine, February 14, 1914), reports six cases treated by this method with the usual result. One of these cases, a woman of 71 years of age, seems to have been an extremely desperate one from the very start, with profound vasomoter shock, marked toxemia and delirium. In speaking of the case he says: "The patient recovered in the usual gradual manner without a crisis, which seems to attend this plan of treatment so uniformly."

Dr. Joseph Bainton, in discussing Dr. Cruikshank's report, speaking of his results with this method of treatment, says: "The number of cases coming under my personal care lies somewhere between 75 and 100. Excepting in cases of delirium tremens and alcoholic wet brain, I do not recall a single death when treatment was begun before the third day, the temperature nearly always sinks to normal gradually instead of by crisis."

Julius Inverson (Vratsch, January, 1912), treated eighty-two cases of lobar pneumonia in the Oberlof Hospital for Men in St. Petersburg, with camphor injections, with seventy-two recoveries and ten deaths, while of 90 cases treated with no camphor, sixty-two recovered and eighteen died.

Prof. Leo, director of the Pharmacological Institute, University of Bonn, in the Deutsch. Med. Wochenschrift, March 27, 1913, in experiments testing the action of camphor—both watery and

oily solutions—in pneumococcic infected animals, says: "Recently I have had still better results in experiments on white mice. Here the camphor was injected hypodermically into animals previously infected with pneumococci. They not only lived longer than the controls, who died in a few days, but some camphorated animals even today several weeks after the infection, are alive and appear to have outlived the pneumococcic infection completely."

Most interesting are the experiments of Boehmke, staff surgeon German army, reported in the Berlin Klin. Wochnschr., May 5, 1913—"Action of Camphor in Bacterial Infection." These experiments were done in the Royal Institute for Experimental Therapy, Prof. Paul Ehrich, director. In brief, they were as follows:

Camphor was first injected subcutaneously into white mice; then a fatal dose of pneumococci into the peritoneum. The controls all died within twenty-four to thirty-six hours; four previously camphorized animals died soon after; six are alive and well after seven days.

In another series, he first injected camphor, then, four hours later, fatal dose of pneumococci; 24 hours after this another injection of camphor, with the result that all animals were alive on the seventh day.

His further experiments were similar, but with varying doses of camphor and with equally encouraging results. He states: "In tests made to protect against a following pneumococcic infection, by using large doses, we have an unquestionable action in camphor, which is gradually weakened by therapy and infection coming close together, and becomes uncertain in curative tests, so that only a greater or less retardation of the fatal issue is seen in the treated animals."

He has further used injections of camphor in conjunction with anti-pneumococcic serum in animals later infected with a fatal dose of pneumococci, in which all animals remained well, wherets the controls all died.

Because of lack of time, I have just briefly gone into the work done in this direction, but from what has been said and done it is only rational to believe that in this method of treatment we have

something, not to be given up and laid on the shelf, as has been done by many with the former use of camphor, but something which ought to be relied upon as a most valuable asset in our treatment of pneumonia. No claims for a specific are held out for this drug, nor that it has a bactericidal action upon the pneumococcus, but I think the biological reports herein mentioned, and the bacteriological reports of Henzel, prove that camphor renders the blood an unsuitable culture medium, and that it is in this way that the camphor acts.

My personal experience with its use has been limited to only five cases in the past 18 months, but I can only reiterate what has been said about it by others. Three of these cases I have previously reported at the West End Medical Society early last year. All five cases were typical of lobar pneumonia, with chill, 104° F. temperature, 120 to 130 pulse, consolidation, profuse bloody expectoration. In all there was an immediate effect produced by the camphor, with a gradual reduction of temperature until in all cases, except one, clinical conditions were practically normal on the third or fourth day after the first injection. In no case, after the camphor was started, was the pulse over 96, where it had previously been between 120 and 140 per minute. In all cases the local pneumonic process remained to be absorbed at a later date, and cough expectoration continued for some time. At no time did I notice any toxic or so-called overstimulative action from the camphor. In one case 270 grains of camphor were injected in 24 hours. I will take the time to report more fully only two of these cases because I think they show more definitely the action of the camphor.

A. G. S., male, aged 17. December 28, 1912, chill, 11 p. m.; temperature at that time 103°, pulse 130; extreme pain over the right chest. Bronchial breathing and dulness over the right apex. Not until 18 hours later did I start the camphor injections, at which time the temperature was 104.5° F., pule 138, marked toxemia, and copius prune juice expectoration; 15 c.c. of 30 per cent camphorated oil were given hypodermically every 12 hours, the evening temperature the day following was 100° F., pulse 96, and apparently little toxemia. On the afternoon of the

next day the boy had another chill and a following temperature left lobe. I increased the injections to 20 c.c., and from then on there was a gradual fall until a 99° F. temperature was reached 60 hours later. At no time did I notice the toxemia that usually is found with as severe a case of double lobar pneumonia as this was.

In this case I feel that I did not at first use large enough doses and did not repeat them often enough, and therefore determined to give larger and more frequent doses in future cases, especially double pneumonias.

The last case was a man 65 years of age, who, on the afternoon of March 6, 1914, had the initial chill followed by a temperature of 103.6° F., pule 128, severe pain in the right chest, cough with blood-tinged sputum and early signs of pneumococcic toxemia. I started the injections immediately, giving 20 c. c. of 30 per cent camphor oil every eight hours and after six injections (forty-eight hours after the initial chill) a normal temperature and pulse were found. The patient, however, went through the ordinary stages of a revolving consolidation as in every case of pneumonia.

In neither of these cases was there any other medication, other than an initial dose of calomel and Epsom salt. In the latter case the patient absolutely refused to have the window open; it is therefore only logical to attribute the result to the action of the camphor.

As for the technique, I have used the method originally prescribed which is very simple and painless. After sterilizing the skin with tincture of iodine and cocainizing the subcutaneous tissue with a 2 per cent solution of cocaine, with either a Luer or a Record syringe, I inject 10 c.c. to the 100-pound weight of a 30 per cent camphorated sesame solution and repeating this every eight or twelve hours, according to the severity of the infection. The best location for the injections is the outer side of the thigh, beginning high up and alternating thighs. As in any other bacterial infection, the earlier the treatment is begun the better and quicker the results.

It is true that before we can accept any drug or method and

its use as a specific, we must have overwhelming clinical evidence in its favor. Boehmke has demonstrated that animals can be immunized to subsequent fatal doses of pneumococci, by the injection of camphor; it is therefore only rational to suppose that the blood of a patient suffering from pneumococcic pneumonia can in the same way be immunized to the pneumococci which are being set free into the blood stream from a consolidated lung.

Other men already have and are constantly giving more clinical evidence which corroborate this action of camphor, I therefore feel that, until pneumococcic infections finally yield to vaccine or serum therapy we have in camphor, with its proper use, a most valuable remedy in combating the toxemia of pneumonia, and in that way reducing the still existing high mortality.

Discussion.

Dr. E. W. Mitchell: A paper of such admirable quality, presenting so important a subject, so logically and clearly stated, is certainly worthy of some discussion.

As we all know, there is pneumonia and pneumonia. Both in private practice and in hospital practice, it is a very common experience to have a series of cases, one after another, with practically all recovering; in the next series of cases, under the same treatment, perhaps an equal number will prove fatal. So, to reach adequate conclusions requires an accumulation of a very considerable amount of evidence.

I think most of us remember some very enthusiastic reports that were published concerning the treatment by very large doses of quinine. Subsequent results have not justified the enthusiasm of the first reports. I myself tried that line of treatment with about the average amount of mortality. We must remember that many of the cases reported as deaths from pneumonia are cases of terminal pneumonia among elderly people, which largely accounts for the very high mortality occurring in people of sixty years or more, or as complicating other diseases.

In these classes of cases we can not expect any great number of cures. It does seem to me that this plan of treatment by com-

phor, as Dr. Seibert has reported it, comes to us better supported than most that we have had for pneumonia. It certainly deserves a very fair trial. When he called my attention to it some time ago, I was very favorably impressed with it, but have not had an opportunity to try it except in one case. The patient, a child of three years, recovered in very much the same way described by the doctor.

There is one feature of this report that appeals to me very forcibly; that speaks, if anything, stronger in support of its real value than the mere statistical record of cases, and that is the way in which the cases have reacted to the treatment. The termination by crisis, the gradual decline and the apparent response of the organism to the "specific" are quite remarkable.

Dr. Charles McDevitt: I would like to ask Dr. Seibert if he has given this method a trial in the treatment of pneumonia in children. He did not give any cases under 16 years of age.

Dr. Seibert: In answer to your question, the reports of this method of treatment report only cases of lobar pneumococcic pneumonia and not bronchial pneumonia, as found in children. I think, in some reports, there were children of three years of age. It is advocated and is really logical to believe that it would have its effect in pneumococcic pneumonia, even in children.

In closing, I did not say anything in my paper about its use in post-operative pneumonia. We have one very recent report by Dr. Russell Fowler, who reported eight cases of post-operative pneumonia, and in his book he says that no drug, with the possible exception of camphor in large doses hypodermically, will affect this condition. The eight cases all made favorable recoveries, and he is now using it as a prophylactic, an hour before operation, with apparently very good results.

I surely appreciate the attention you have given this paper and the personal encouragement of Dr. Mitchell. I thank you.

Dr. Freiberg: I would like to ask whether camphor is an agent of known value in combating other infections than pneumonia.

Dr. Seibert: I have not read or heard of its use in other infections. It has been used considerably in shock with greatly varying results. Just recently, in the Journal of the American Medical

Association, March 7, Dr. S. T. Pope, of San Francisco, in speaking of the action of camphor in shock, is quoted from the California State Journal, December, 1913, as saying that although there was no evidence of its action on the hearts of animals that had been shocked by bleeding almost to death, there was an appreciable action in patients after operation. But as to its action in other infections, I do not know of any.—*The Lancet-Clinic.*

Extracts from Home and Foreign Journals.

SURGICAL

Splenectomy for Pernicious Anemia.

Eppinger quotes five other clinicians who have reported constantly favorable results from removal of the spleen in treatment of pernicious anemia. He here discusses the mechanism of the benefit derived, his research indicating that the blood vessels in the spleen are modified in a peculiar way which permits the red corpuscles to escape into the pulpa, where they are destroyed. The normal way through the capilaries seemed to be obstructed in the seven spleens he has removed for pernicious anemia. When the red corpuscles escape into the pulpa and thus come in contact with connective tissue and die off, the conditions are much like those with hemorrhage from an artery; removing the spleen puts an end to the process, and it is possible also that merely ligating the splenic artery would answer the same purpose. This should be reserved for cases in which there are objections to removing the spleen. He calls attention further to the possible occurrence of "blood lymph-nodes," Hamolymphdrusen, in cases of pernicious anemia; they seem to be of a structure analogous to that of the spleen, and seem to be able to compensate for the lack of the spleen. They are found in many animals, and he has noticed them in profusion in cases of pernicious anemia. When benefit does not follow splenectomy, it is more than probable that these blood-lymph-nodes are carrying on the pernicious activity of the spleen. Special attention should be paid to them in all cases of pernicious anemia, but the possibility of their presence, he reiterates, should not bring discredit on splenectomy as the most important measure in treatment of pernicious anemia. — *Medical Sentinel.*

Editorial

PUBLISHER'S NOTICE—The Journal is published in monthly numbers of 48 pages at $1.00 a year, to be always paid in advance.

All bills for advertisements to be paid quarterly, after the first insertion of the quarter.

Business communications, remittances by mail, either by money order, draft, or registered letter, should be addressed to the Business manager, C. S. Briggs, M. D. corner Summer and Union Streets, Nashville, Tenn.

All communications for the Journal, books for review, exchanges, etc., should be addressed to the Editor.

STATE SOCIETY MEETING.

The eighty-first annual meeting of the Tennessee State Medical Society was held in Memphis, at the Hotel Chisca, on the 7th, 8th and 9th days of this month.

There was an unusually large attendance of doctors from all over the State as well as visitors from other parts of the country.

Dr. W. D. Haggard delivered the presidential address, a masterpiece of its kind, in which he called the attention of the society to many of the present day problems confronting the profession

Dr. Lucius P. Brown's paper, entitled "The Drug Habit in Tennessee from the Viewpoint of an Enforcing Official," called forth a great discussion, as was to be expected, since several sections of the law are not definitely drawn up. It is hardly necessary to mention the fact that Dr. Brown's attention was called to this.

The special addresses of the occasion were made by Dr. Bertram W. Sippey, of Chicago, and Dr. Joseph C. Bloodgood, of Baltimore; the former spoke of the medical and surgical aspects of gastric ulcer, the latter chose the cancer problem as his theme. Both papers were excellent and will be long remembered by those present.

Many other valuable papers were read, the discussions being unusually lively. The cabaret banquet was very enjoyable, not only because of the good entertainment furnished by vaudeville artists secured for the occasion, but also because the speakers of the evening, each and all, had something good to say and said it.

The following officers were elected: President, Dr. Samuel M. Miller, Knoxville; Vice-Presidents for Middle Tennessee, Dr. Hilliard Wood, Nashville, East Tennessee; Dr. John M. Clack, Rockwood, West Tennessee; Dr. Samuel T. Parker, Lexington; Secretary, Dr. Olin West, Nashville; Treasurer, Dr. Charles N. Cowden, Nashville; Trustee, Dr. George E. Pettey, Memphis; delegates to the American Medical Association, Drs. Perry Bromberg, Nashville, and Edward C. Ellett, Memphis; alternates, Drs. Andrew F. Richards, Sparta, and William T. Black, Memphis; councilors, first district, Dr. Claude P. Fox, Greenville; second district, Dr. Andrew F. Richards, Sparta; fifth district, Dr. Frank B. Reager, Shelbyville; seventh district, Dr. Luther E. Wheat, Brick Church, and ninth district, Dr. Tazwell B. Wingo, Martin.

The next meeting of the society will be held in Nashville, April 7, 8 and 9, 1915.

Malaria and the Mosquito in India.

Malaria in India is taking a heavy toll of death and illness and the question is of much more vital interest than in more temperate climes and in more civilized communities. Inhabitants of this country see hopeful signs of being in part at least rid of this one of their many scources of a painfully patient people. This hope was encouraged by a paper by Sir Pardey Lukis at the recent All-Indian Sanitary Congress at Lucknow. India has been slow in receiving at full value the anti-mosquito idea in the eradication of malaria. The Indian advocates of the quinine theory dwelt in extenso on the futility of the anti-mosquito theory in such a country as Bengal, made up as it is of jungle, rice fields, tanks, pools, swamps and stagnant rivers. It was highly improbable that the quinine-soaked portion of the population of India would ever persuade the remainder of the population to overcome their dislike for the drug and the want of faith in its power to ward of or prevent the disease, to join them. The cantonnement of Meerut became more and more malarious during the 70ies and the abandonment of it as a military station was discussed. Extensive drainage operations were carried out, since which there has been

a steady decline in malaria and the usual autumn rise in mortality has disappeared. It is claimed that the expenditure of 150,000 rupees ($50,000) has saved 10,000 lives, besides great economic gains, from the prolonged and prostrating sickness. Much valuable time and many no less valuable lives have been sacrificed by the Bengal Committee who misunderstood the meaning of the word jungle. They were awarded a sum of money to clear out the jungle for the purpose of diminishing the prevalence of malaria in Bengal. They assumed that the word "jungle" included fruit trees and bamboo and thereupon declared that the clearing of jungle in Bengal villages was impracticable and impossible. The object was to eradicate useless and rank undergrowth of scrub, bush and trees. It is stupid that they should have allowed Bengal to lose the benefit of this award from the misunderstanding of a single word which could have been explained merely for the asking. The reports of Capt. Steward and Lieut. Proctor upon their examination of the malarial problem in Jessore and Nada distinctly indicate the connection between thick jungle and the existence of malaria. This they show by the condition of the spleens in such sections. It is to be hoped that one result of the All-India Sanitary Congress will be to determine to prosecute the conquest of malaria on the anti-mosquito plan which includes drainage and especially wiring of houses and the greater use of mosquito nets and to study more faithfully the habits and habitats of mosquitos. If the white man is to occupy and rule the tropics, and it seems he must, then this question is of great importance. It is claimed in some tropical sections that malaria is the cause of three-fourths of the temporary invaliding and much of the permanent.—*E. S. McK.*

Tropical Medicine from the Tropics.

Meet it is when one has just finished visiting Palestine, Egypt, India and Ceylon that he should while crossing the Equator en-route to visit the Dutch East Indies betake himself to his cabin, turn on the electric fan, divest himself of coat, collar and what further deponent saith not, and proceed to sweat and write on

Tropical Medicine. America has taught the world in building the Panama Canal. Not only in that great engineering feat, but in that feat of medicine which made the path possible for the feet of the engineers. Colonel Ceorgas has said: "The work on the Isthmus will demonstrate to the world that the white man can live and work in any part of the world, and that the settling of the tropics by the Caucasians will date from the completion of the Panama Canal." It is doubtless true that the discovery of the parasite of malaria and the role of the mosquito as a carrier enabled the U. S. Government to build that great water-way from the Atlantic to the Pacific. Every year brings out some new truth in tropical medicine and none are more industrious than the societies on tropical medicine. The Proceedings of the British Medical Association at Brighton last summer, which the writer had the pleasure of attending, are now appearing in the Journal and have added much to important truths by adding freshly acquired evidence. It will be learned from these discussions that diseases of the nervous system occupy first place as the immediate cause of temporary or permanent invaliding in the tropics. The returns on which these conclusions are based are gleaned from very comprehensive sources. About 28 per cent of cases of invalidism in the tropics are considered as due to nervous diseases. About 42 are put down as due to infectious, and therefore preventable diseases. The abuse of alcohol is followed by much invaliding in the tropics. This abuse is not as great as in temperate regions, but is followed more quickly and certainly by disastrous results. While the conditions of life in the tropics tend to make work more difficult, it is also true that many men in the tropics have much more work devolving on them than they would be able to do even in temperate regions without suffering ill effects. The over stimulation of the optic nerve from the glare of the sun is a frequent cause of nervous breakdown and should lead to that simple precaution, the wearing of shields for the eyes. The missionaries have added much of value to our knowledge of tropical medicine. They have sent reports from the tropics everywhere and are even more valuable than those from the British army, because the latter are limited to the British Empire. It is

acknowledged that while nervous diseases are the leading cause of disability in the tropics, these nervous conditions are often due to other diseases, such as malaria, enteric fever, dysentery, etc. The report from the British army does not show a very great difference in the causes of invaliding in the tropics as compared to the same at home. The moral is to give especial care in the selection of men for the tropics to mental as well as physical qualities. Should men return to the tropics after being affected thereby? Generally, no, especially if having suffered from sunstroke, though there have been some very marked exceptions.—*E. S. McK.*

Tuberculosis in India.

That tuberculosis in India is on the increase is sustained by many competent observers. Among those are a number in attendance on the recent Congress of Hygiene of all India, held at Lucknow. Particularly is this found to be present among that class of indoor workers often poorly fed and housed, underpaid clerks and students. This is not only so in the large cities but also in the villages. In the latter in fact are the laws of hygiene less understood and carried out than in the larger centers of population. The people are anxious for instruction on the lines of the prevention of tuberculosis. Education is necessary and sanitoria are required as much for this as for the treatment of the disease. They should be near, not in, the centers of population. The encouragement of tubercular hospitals and dispensaries was recommended by the Congress. The government alone can not control this scourge but must have the coöperation of the people. Dr. Lankester thought it would be well if some of the money spent on palatial educational buildings could be diverted to the less showy but not less necessary work of destroying buildings which were known as breeding places of tuberculosis. Tuberculosis preventoria were warmly recommended by Dr. Newell, Majors Sprawson and Cochrane in their papers recommended the providing of better buildings for the poor and for improved

town planning. Dr. Wanless was sure that tuberculosis was greatly on the increase in India. Sanitaria should be constructed in such places as to be available for service throughout the whole year. He thought there should be tuberculosis shelters attached to every dispensary. Major Sprawson thought that tuberculosis wards were preferable to shelters, as a shelter at least in some parts of India could not be sufficient unless protected on three sides from dust, wind and heat.—*E. S. McK.*

Infantile Mortality in India.

Infantile mortality in India as in Egypt is very high. This can be easily seen to be due to the prolonged high temperature, improper feeding, early marriages, poverty of the people, the dearness and the badness of milk and the ignorance of mothers and midwives. Calcutta has appointed a number of lady doctors for the prevention of infantile mortality and they by their house to house visits and talks to mothers wherever they can be gotten together have done very much good. In Bombay nurses have been appointed with each dispensary for house to house visiting and in any way to teach mothers how to prevent the great infantile mortality.—*E. S. McK.*

Warning to Users of Turpentine for Medicinal or Veterinary Purposes.

Users of This Substance Cautioned to Make Certain that it is Not Adulterated.

Washington, D. C., April 10, 1914.—As the result of an investigation by the U. S. Department of Agriculture, it has been found that the adulteration of turpentine with mineral oils is so

widespread that druggists and manufacturers of pharmaceutical products and grocers' sundries used for medicinal and veterinary purposes should exercise special caution in purchasing turpentine. Those who use turpentine for this purpose, unless they are careful, run a risk of obtaining an adulterated article and unnecessarily laying themselves open to prosecution under the Food and Drugs Act.

It has been found, moreover, that the turpentine sold to the country stores especially, as usually put out by dealers and manufacturers of grocers' sundries, is often short in volume by as much as 5 or 10 per cent. Dealers, therefore, should also protect themselves through a guarantee from the wholesaler that the bottle contains the full declared volume.

The Department has found that turpentine may be adulterated in the South where it is made and that the further it gets from the South the more extensively and heavily it is adulterated.

In all cases, druggists, manufacturers and wholesale grocers, should satisfy themselves that the turpentine is free from adulteration and is true to marked volume.

Salvarsan Deaths.

(Editorial in the Southern California Practitioner for March.)

Superintendent's Whitman's Report.

Los Angeles, March 11, 1914.

Honorable Board of Supervisors, Hall of Records, City.

Gentlemen.—I herewith submit to your body a report covering, as near as possible for me to do, all of the circumstances and particulars appertaining to the fatalities which occurred at the County Hospital following the administration of salvarsanized serum to eight patients, all of whom were suffering from the effects of syphilis in advanced stages of the disease. In some, there was dis-

ease of the bones; others were in advanced stages of locomotor ataxia, in which portions of the spinal cord were degenerated. The Wassermann test, which is considered reliable, was made in each and every case; in addition a cell count of the cerebro-spinal fluid and the butyric acid test were made, all corroborating the clinical diagnosis of syphilis.

Hence there can be no question as to the nature of the disease from which these patients suffered. The diagnosis having been confirmed, the question of treatment was a matter of selection. Well knowing that the older forms of treatment had proven ineffective in syphilitic cases, where the spinal cord was involved, and neosalvarsan, which has been regarded as a specific in the earlier stages, had proven ineffective when administered by the blood or into muscular tissue, another recognized mode of procedure was adopted, viz., the intra-spinal administration of salvarsanized serum, the technique of which is somewhat complicated, but it is exact, i. e., the quantity given to each person is definitely known, and according to reports from medical authorities, is more effective than when given in any other way.

In this connection I desire to state to your honorable body that the Los Angeles County Hospltal, instead of being an experimental station, as might be inferred from some published accounts concerning this unfortunate affair, is in fact, although progressive, one of the most conservative of its kind, as is evidenced by the fact that the intra-spinal method of using salvarsanized serum had been in use for at least a year in many medicinal centers throughout the country before being used in this institution, and medical reports seem to indicate that this method is becoming the method of choice by many physicians in the treatment of spinal syphilis. It follows therefore that the treatment here used was no experiment, and I desire at this time to emphasize the fact that no experimental treatment upon human beings has been conducted in this institution since my incumbency, nor will any be tolerated.

On the 7th of the present month, after consultation with several physicians, all members of the attending staff, Dr. A. T. Charlton directed the administration of salvarsanized serum to

eight patients in the County Hospital, the serum having been prepared by himself according to authority. As all accounts so far published in the local press concerning the preparation and administration of this remedy to these patients are more or less inaccurate, I submit herewith attached in detail, Dr. Charlton's statement concerning the technique followed by him throughout the whole procedure.

Statement of Dr. Charlton.

"On Friday, the 6th instant, between 9 and 11 a. m., I withdrew about 15 c.c. of blood from the veins of the arms of eight patients, and from two others about 6 c.c. of blood only was obtained. The amount of blood received from the two latter patients furnishing an insufficient quantity of serum for the spinal treatment, I decided to make a dilution which would include eight spinals and two intravenous treatments, and this was done. Two ampoules were used for this dilution. On account of the lapse of time the intravenous was not used.

"The blood was taken through sterile pipettes placed in sterile centrifuge tubes and the serum separated from the fibrin and red cells. The serum which was perfectly clear, was pipetted off to the amount of 5 c.c. and this was placed in a sterile glass stopper bottle; to this was added one, two or three milligrams of freshly dissolved neosalvarsan in sterile normal salt solution. Following this there was added to the preparation 8 c.c. of sterile normal salt solution, using a sterile graduated all glass syringe. This procedure was carried out absolutely with the serums from each of the eight patients separately. The preparations were then all placed in a water bath at a temperature of 54C for one-half hour. They were then placed in a refrigerator for twenty hours, each bottle labeled with patient's name and dosage for each.

Technique of Administration.

"Under the usual aseptic conditions from three to seven c.c. of spinal fluid was drawn from each patient. Then from each individual bottle there was taken the diluted salvarsanized serum,

using a sterile graduated glass syringe, and with this syringe the contents was introduced through the same needle by which the spinal fluid was withdrawn."

I desire to state further that from the time my attention was called to these cases until the present, I have left nothing undone that would shed light upon the cause of this tragedy.

I personally drove to Pasadena and got the Coroner, and at his request went for the County Autopsy Surgeon. I also called in consultation a half a dozen or more prominent members of the profession, whose knowledge and advice might be of service to us in this emergency.

I personally phoned to all of the morning newspapers, giving them the first information they had of the affair, and I have practically placed myself and the records of the Hospital at the disposal of the public through the press and county officials ever since.

As to the embalming of these bodies prior to autopsy, I will state that this was not done at the County Hospital, nor by anyone connected with the Hospital, but was done without our knowledge after the Coroner had removed the bodies from the Hospital.

It is only fair to the Coroner to state that to my personal knowledge he was advised by six or more physicians that an autopsy would not reveal any characteristic lesions that would account for the deaths, and this opinion was substantiated by the autopsy. However, the autopsy was justified, since it revealed syphilitic lesions in the lung, liver and spinal cord in a patient who had denied having syphilis, thus corroborating the clinical and laboratory diagnosis and justifying the anti-syphilitic treatment.

The most plausible explanation of the cause of death in these cases is that oxidation had taken place in the neosalvarsan. This could have occurred through some defect in the glass container that was not apparent at the time the preparation was used.

In conclusion I desire to express our appreciation of the treatment accorded our County Hospital by the great mass of the public and the press in this unfortunate affair, and I can only repeat that there is nowhere more sorrow concerning this unfortunate

outcome of what was intended to be for the best health interests of the deceased patients than there is among the house and attending staffs of the Los Angeles County Hospital.

Very truly yours,

C. H. WHITMAN, *Supt.*

OBITUARY.

JOSEPH DECATUR BRYANT, M.D., LL.D.

Dr. Joseph D. Bryant, whose death occurred on Tuesday of this week, was a man of wide learning and broad human sympathies and had led a life of great professional activity and of usefulness in many and varied directions. He had been Surgeon General of New York State, Health Commissioner of New York City and Commissioner of the State Board of Health; president in succession of the New York Academy of Medicine, the New York State Medical Association, the New York State Medical Society, and the American Medical Association. He was a member of the International Society of Surgeons and of the American Surgical Association. He was also a veteran of the Seventy-first Regiment of the National Guard, and was for several years the Surgeon Major of that command. He was at one time President Cleveland's physician and for many years enjoyed his friendship and confidence.

Dr. Bryant was born in East Troy, Wis., on March 12, 1845. He was educated at Norwich, N. Y., and obtained his medical degree from the Bellevue Hospital Medical College in 1868. He spent two years as interne in Bellevue Hospital, and ever since that time had been connected in one capacity or another with the factulty of the Bellevue Hospital Medical College and of its successor, the University and Bellevue Hospital Medical College, holding the chair of the principles and practice of surgery and of

clinical and operative surgery in the latter institution at the time of his death. He was a visiting surgeon at Bellevue Hospital since 1882, and at St. Vincent's Hospital since 1887. He was also consulting surgeon to the New York City Insane Asylum, the Northwestern Dispensary, Hospital for the Ruptured and Crippled, Woman's Hospital, and St. Joseph's Hospital, Yonkers. He contributed frequently in his earlier days to the medical periodicals, was the author of a treatise on Operative Surgery in two volumes, and was co-editor with Dr. Buck of the American Practice of Surgery in eight volumes.—*Medical Record.*

Reviews and Book Notices

"The Clinics of John B. Murphy, M.D., at Mercy Hospital, Chicago." Vol. III, No. 1. Octavo of 190 pages, 91 Illustrations. Philadelphia and London. W. B. Saunders Co., 1914. Published Bi-Monthly. Price per year: Paper, $8.00; Cloth, $12.00. W. B. Saunders Co., Philadelphia and London.

Our thanks are due the accommodating publishers, W. B. Saunders Co., for the February number of the Clinics of Dr. W. B. Murphy. This number, as in all previous numbers, is replete with good things. Bone Surgery is predominant in this number and the work of the master surgeon in its most progressive form is well illustrated. Besides the lectures of Dr. Murphy, this number contains a talk on Lord Lister and Antiseptic Surgery, by Sir Rickman J. Godlee, one on Nitrous Oxide Anæsthesia, by Dr. Geo. W. Crile, of Cleveland; one on Metastatic Infection, by Dr. George Emerson Brewer, of New York City, and on Gastric Ulcer and Gastric Carcinoma, by Mr. Herbert Paterson, F. R. C. S., of London. The clinics are exceedingly valuable to the practitioner as an exposition of the most up-to-date surgical work and should be in the hands of every progressive surgeon who desires to be in the front rank.

"Treatment of Chronic Leg Ulcers, a Practical Guide to Its Symptomatology, Diagnosis and Treatment." By Dr. Edward Adams. 122 pages. Cloth $1.00. Published by The International Journal of Surgery Company, 100 William St., New York City.

We are greatly pleased with this eminently practical brochure upon a very common and very obstinate class of diseased processes and feel sure that practitioners generally who obtain this work will feel themselves under obligations to the author who has placed before them a practical guide in the recognition, diagnosis and treatment of chronic ulcers of the legs. "The lower extremities are so frequently the site of chronic ulcerative processes that a knowledge of the different varieties of leg ulcers and their treatment according to modern methods should be possessed by

every general practitioner." In a clear and concise manner the author has placed in this small volume all the knowledge requisite in diagnosis and the most approved methods as applied to each variety of these sometimes obstinate leg ulcers. We regard this small, carefully prepared booklet as a really valuable addition to medical literature.

"The United States Brewers' Association."—The Year Book, with Proceedings of the Fifty-Third Annual Convention. Held in Atlantic City, N. J., Friday and Saturday, October 3 and 4, 1913. The United States Brewers' Association, New York, 1914.

We acknowledge with thanks the receipt of this volume of transactions. At this time when a wave of prohibition is sweeping the country, this proceedings funishes much food for thought. We are not believers in country-wide prohibition, for we do not think laws can be enacted and enforced that will force abstinence on the people. Intemperance is at all times an evil of unlimited dimensions and is at the root of all crime and casualties, but we can not see how the present-day movement will prevent it. "The Year Book is intended to serve as a reference book for editors, students, instructors and public men generally." In glancing over the volume we find many things of interest to the general public.

"Communicable Diseases."—An Analysis of the Laws and Regulations for the Control Thereof in Force in the United States. By J. W. Kerr, Assistant Surgeon General, and A. A. Moll, A. B. Prepared by Direction of the Surgeon General. Washington Government Printing Office, 1914.

We are indebted to the courtesy of our Congressman, Hon. Jos. W. Byrns, for a copy of this important publication. It is a publication of the laws and regulations for the control of communicable diseases in the United States. Changes in the modes of prevention and the management of such diseases have been necessitated by the recent knowledge of the source of such diseases as malaria, yellow fever and typhoid fever. This publication is invaluable as a guide to health authorities who have in hand the sanitary control of communicable diseases and will prove of great use to physicians who are called upon to attend such diseases and

to prevent by suitable precautions their dissemination. The book contains a good deal of valuable instructive reading for the general practitioner.

"Progressive Medicine."—A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics, Materia Medica, and Diagnosis in the Jefferson Medical College, Philadelphia; Physician to the Jefferson Medical College Hospital; One Time Clinical Professor of Diseases of Children in the University of Pennsylvania; Member of the Association of American Physicians, Etc. Assisted by Leighton F. Appleman, M.D., Instructor in Therapeutics, Jefferson Medical College, Philadelphia; Ophthalmologist to the Frederick Douglass Memorial Hospital; Instructor in Ophthalmology, Philadelphia Polyclinic Hospital and College for Graduates in Medicine. Vol. I. March, 1914. Surgery of the Head and Neck—Surgery of the Thorax, Excluding Diseases of the Breast—Infectious Diseases, Including Acute Rheumatism, Croupous Pneumonia, and Influenza—Diseases of Children—Rhinology and Laryngology—Otology. Lea & Febiger, Philadelphia and New York. 1914.

This excellent quarterly publication appears in its March issue and as usual contains a great deal of new and up-to-date material of the greatest importance to the general practitioner. The following are the contents of this volume:

Surgery of the Head and Neck, by Charles R. Frazier, M.D.; Surgery of the Thorax, Excluding Diseases of the Breast, by Geo. P. Müller, M.D.; Infectious Diseases, Including Acute Rheumatism, Croupous Pneumonia and Influenza, by John Ruhräh, M.D.; Diseases of Children, by Floyd M. Crandall; Rhinology and Laryngology, by George B. Wood, M.D.; Otology, by Arthur B. Duel, M.D. Index.

No other publication in the world treats of the advances and improvements in medicine and surgery in such a complete and systematic way and for that reason every practitioner who desires to keep himself informed as to the progress of medicine should procure the work.

Publisher's Department

Bronchial Catarrh.

"The douche you so kindly sent me with your compliments was duly received. I have been using Glyco-Thymoline on myself for the past month or more in a case of bronchial catarrh of over thirty years' standing, and am happy to state that the result has been gratifying and an agreeable surprise to me. I don't exaggerate when I say it has done me far more good in this short time than all the remedies put together that I have used in the past. If it did not cure, the relief and comfort it secures would justify its use, but I think a persistent use for a reasonable time will result in a cure of any case." Dr. J. T. Dollahan,

Sumner, Illinois.

Pepsin is undoubtedly one of the most valuable digestive agents of our Materia Medica, provided a good article is used. "Robinson's Lime Juice and Pepsin" (see advertisement in this issue) we can recommend as possessing merit of high order.

The fact that the manufacturers of this palatable preparation use the purest and best pepsin, and that every lot made by them is carefully tested before offering for sale, is a guarantee to the physician that he will certainly obtain the good results he expects from pepsin.

Prevention of Posterior Urethritis.

It is said that the salicylate of sodium, though of comparatively little value in the inflammation of the anterior urethra, exerts a beneficial effect in posterior urethritis. Under its influence the urine rapidly clears, and the acute distressing symptoms disappear. It is upon the theory that this drug renders the urine mark-

edly acid, and thereby helps in preventing the extension of the inflammation to the bladder and the production of cystitis. Apart from the administration of salicylate of sodium, the treatment must also be directed to combating the prominent symptoms of acute posterior urethritis, vesical tenesmus, terminal hemorrhage, etc. Sanmetto should be given, and the use of the hot sitz bath prescribed. Should the distress be very great, small doses of morphine may be administered.

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CHARLES S. BRIGGS, A. M., M. D., Editor

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Original Communications

MEDICAL NOTES FROM THE ORIENT.

BY E. S. MCKEE, M.D., Cincinnati, Ohio.

RACE SUICIDE.

"The womb is an animal which desires ardently to bear children."—*Plato*. In a recent visit to Egypt I met some old medical fellow students and some medical students whom it had been my honor to partially instruct. In fact at a thanksgiving picnic in a garden full of flowers and oriental vegetation, on the banks of the Nile, with dhabehias sailing by, there were present out of 60 Americans — the whole American colony at Assiut—three graduates of the Medical College of Ohio at Cincinnati. They were, Dr. L. M. Henry, for twenty-two years a faithful and successful medical missionary at Assiut; Dr. Aziz Ibrahem, and the writer. I was called a number of times in consultation among the rich and the poor, and generally women. The great majority of these women complained of sterility. Some had gone five, ten, or fifteen years of married life without becoming pregnant. The Egyptian woman, generally, has not much education. And be she rich or poor she has not much work. She simply sits and thinks and sometimes she simply sits. Her whole mind and conversation turns on childbearing. She loses favor with her husband if she does not bear children and with all her friends and

relatives. In Egypt sterility is often a cause for divorce. Divorce is very easy and often in Egypt. A man has simply to say to his wife: "I divorce you, I divorce you, I divorce you," and divorced she is. Easy and inexpensive. I was asked to see one Egyptian woman whose complaint was that though she had four children and two miscarriages she had gone two whole years without conceiving. I have not often been consulted under those circumstances in America. Unchastity among girls in Egypt is almost unknown. Dr. Henry tells me that he has met with but about five cases in 22 years of extensive hospital and private practice in Egypt. The reasons for this are that the girls are trained up to consider it one of the worst things on earth. They are threatened with death if they do, and they are married at puberty. Another thing which may have some influence on the sexual excitability is the fact that when a female child is born the midwife makes traction on the clitoris and snipes it off with the scissors. Although syphilis is very common in Egypt, gonorrhoea is rare and mostly confined to Cairo, and those who having visited Cairo have also visited the foreign demi-mondes there, mostly French, who have introduced gonorrhea. Under these circumstances of early marriage and long desire for children it is not surprising that the birth rate in Egypt leads that of all countries, nor can we wonder that the infantile death rate also leads the world. It is not uncommon to find a woman who has eight or ten miscarriages or deaths in early infancy begging for more.

Education does not lead to increased childbearing in women. On the contrary it decidedly diminishes it. If we wish to see examples of this we have only to look at the fertility of our pioneer ancestors and that of the highly educated city bred women of our land today. The difference is wonderful.

Though it may appear in bad taste I can not find a better illustration of this falling off in fecundity than in my own family and so will ask pardon for relating it. My father's grandfather when a young man was killed, a soldier in the colonial army in the American Revolution. He left a widow and an infant boy. This boy grew up, married and had eight children. These eight chil-

dren had 13, 8, 6, 5, 3, 2—37 in all. My father was the one who had 13, and this generation of 37 are done bearing and have only borne 22. The next generation promises few.

The family consisted of just a round dozen. It was enough. They wanted no more. Who could blame them. Surely not I. Children had been coming on at regular intervals of two and one-half years. Three and a half had now passed. My parents thought they were to have a long desired and well-earned rest. My immediate predecessor had been considered the baby of the family and spoiled accordingly. I upset all calculations and appeared on the scene. Who knows how much babies know. I have grown gray since, but here on the other side of the world I will attempt to describe, in verse, the scene which was so indelibly impressed on my mind that morning.

NO. 13—THE UNWELCOME GUEST.

A terrible row when I was born,
At four o'clock one winter's morn.
My brothers' said,
"His hair is red."
My sisters' rub,
"His nose is snub."
My father, always good and wise,
"He's a fine boy with big brown eyes."
My mother's plaint, "Am I never done,
'Tis now eight times I've borne a son,
And daughters five
Sure's I'm alive.
From sixteen years to forty-six,
Just thirteen times I'm in this fix.
It's watch and work from morn to morn,
I wish to God I'd never been born."
The rooster crowed (crew),
The wild wind blowed (blew);
The ice grew thick
On the frozen crew.
Why waste our lives on wearisome rows,

'Tis high time now to milk the cows.
We heard a noise at the barnyard gate;
In puffed Doc. Davis an hour too late.
Has happened to me full many a time
Since eighteen hundred and seventy-nine.
Near three-score years have come and gone
Since that wild wintry unwelcome morn.
Father and mother have passed away,
Though their full time allowed to stay.
Of daughters five,
Not one alive.
Of the eight sons, there are no more,
And yet remain exactly four.
Among the last, "The Unwelcome Guest,"
Still wanders the world, not yet "At Rest."
Unabated the wind on the winter's morn
Unanswered the question, "Why was I born?"

The above was partly composed while gazing at the shriveled mummy of Rameses II, at Cairo, Egypt.

THE MILK SUPPLY OF INDIA.

If there is anything which, on the surface, needs improvement in India it is the milk supply. To look at the miserable, half starved, dirty, hobbled cows and buffalo cows of that country is enough for the most inveterate milk fiend to cause him to eschew it altogether. Generally, the milk in India is just as bad as one would suspect it of being. How the cows ever can spare any of their nourishment to go for milk I do not know. It is well that this subject received much attention at the recent sanitary conference at Lucknow. Papers were read by Dr. Joshi, Mr. McMahan and Mr. Rau. Mr. McMahan said that the milk of the Indian Buffalo cows was richer in fat than that of the European milk. I suppose their fat all goes into their milk, for there is certainly none left elsewhere. He said it should not be compared with European milk. Surely not. The author thought that the other standards of milk would be useful in forming standards

of comparison in India. Dr. Turner spoke at length on the advisability of fixing bacteriological as well as chemical standards. Such standards differed locally and should be fixed by persons adequately acquainted with the local conditions. Very large quantities of condensed milk, especially Swiss, are now used in India, and attention was called to the necessity of fixing chemical and bacteriological standards for this as well as the native milk. Recent researches had shown that imported condensed milks were largely contaminated bacteriologically, especially with staphylococci. Dr. Mann, in introducing his paper on the milk supply in India said that he thought that his paper described the first complete examination of the milk supply in India of a large city. In Poona, the city referred to, the amount of milk consumed per head was extremely small, but largely adulterated. In initiating any measures for the improvement of the quality of milk it would necessarily follow that prices would advance and that the poor would be deprived thereby of their milk. Whether no milk or bad milk is worse is an open question. He thought that the amount of milk from each animal should be increased as much as possible. Cows should be removed farther from the cities to cheaper and more healthful surroundings. The milk supply of cities from the outside should be organized and controlled. Dr. Gwell gave statistics on the prices of milk in Lahore, and the profits on the same. He found the expense of feeding cattle responsible for the high price of milk. He complained of the unsanitary practices of the workmen about the handling of milk. He urged the necessity for organization preceding restriction. They could only succeed through coöperating with the producers and should not antagonize them. We hope that the discussion of the milk supply of India at the sanitary conference will bear good fruit. India sadly needs improvement in her milk supply. Her cows need better food and more of it. How to get this in a country where the people are starving is a problem. They need more freedom, not always tied or hobbled or herded. Lastly, they need better cows.

Having been in medicine for more than a third of a century I felt a bit ashamed of myself for never having seen a case of

Asiatic Cholera or Bubonic Plague in my life; this, in spite of extensive clinical experience, both at home and abroad. In India I found cities where both these diseases, as well as smallpox, were epidemic, but here also it was my misfortune or my fortune not to see a case of these diseases. In Manilla, where the United States flag still floats where you can get iced tea, iced water, ice cream, hot biscuits, succotash and hear the English language spoken as she is spoken by one hundred millions, I found a Dr. Jackson from Akron, Ohio, in charge of the San Lazaro Hospital —the infectious hospital. I called him up saying that I had never seen a case of Asiatic Cholera or Bubonic Plague and asked him if he had any in the hospital. He said he had and would be pleased to show them to me. He asked if I would come out this evening or tomorrow. I said either. He said I had better come out this evening as the patients might not live till morning. I went and saw my first cases of these two diseases. They did not seem so frightful as I had expected them to be.

In Java Dutch East Indies the cinchona tree is cultivated to a considerable extent. While there last February I asked to be allowed to visit a quinine factory at Bandoeng. I was refused more firmly than politely. They were afraid that I would steal some of their secrets. A nice characteristic for people manufacturing medicine to heal the sick. Would one feel like trusting those who will trust no one. . Oe in Dutch and in Bandoeng is pronounced like U.

During a recent visit to Canton, China, I was much pleased to see some of the excellent work done by Dr. Mary Niles in her hospital and school for blind girls and Dr. Mary Fulton in her hospital and medical school for women. Both have been long and faithful in the service and both are Americans.

ARE OUR PEOPLE TOO WELL HOUSED?

An Enquiry and a Statement by a Layman.

We laymen are sometimes blessed with an embarrassing amount of advice. We are told to provide ourselves with warm and dry quarters to avoid the many ills coming from excess dampness and from the direct blowing of the winter winds upon us. Again, we are told of the disadvantages of stove heat and of furnace heat and of almost every kind of heat.

On the other hand, we are told to provide moisture; and it seems from the answers to "anxious enquiries" that hardly any device we can conceive of will bring this moisture in the air up to the proper point.

A great deal has been written about cement and other gypsum-made houses. We are told they are unhealthy and impossible, because of their moisture-laden condition, owing to "capillary attraction." We get pages of sage advice upon "drafts," "cold floors" and improper ventilation. Learned articles are turned out galore about the "curse of the privy vault," "danger lurking in well water," and so on, almost without end.

All of these things recurred to me as I packed my belongings, left my modern Chicago apartment and went to Lomax Henderson County, Illinois, a new city being built after a plan for the betterment of the "common people;" and with many admirable restrictions and provisions which are to be forever existant through a trust deed filed with the court, obligating all rulers now and hereafter to bide by these rulings.

I found that the majority of the houses were built of stucco under a process that they call "pouring," each side of these houses being poured while laying flat, and then stood up after hardening.

The walls are very thin, the material porous, and I heard a great deal said about the houses being damp and the wind blowing through almost without restriction; there being, some claimed, but little more protection from the weather than in a tent.

I moved into one of these houses with some fear and trembling, but decided to "try it out," as I was assured they were only

temporary and would be replaced in time with permanent structures.

I have never spent a winter with as few colds, as few ailments of other kinds, and with as much enjoyment as I have spent in one of those little stucco shacks in Lomax. This caused me to make some investigation and found that this healthy condition was universal—that the ratio of sickness and death was less here than in any older community in this part of the country. This seemed the more remarkable to me, as most of the families were numbered from five to nine persons, and 200 of these houses, for what are called the laboring men, are of but one or two rooms, very small, and like the rest, unfinished on the inside.

Toilet provisions are made at a distance from the house. Water is abundant and the softest and purest I have ever met up with. However, these people must go to outside wells and pump the water. Consequently it is not used in any great quantities for cleansing purposes. There is no running water, no sewer system, and none of the so-called advantages of the metropolis, yet installed.

Still, with all of this, I find that the deaths in two years, ending March 1, 1914, were but 16 in number, and that the average number of inhabitants has been 850 to 900. There have been in the two years only five deaths of people over four years of age. One death, male, 62 years of age, no cause given. One, 45 years of age, typhoid malaria (contracted elsewhere; came home ill). One girl 10 years of age, pneumonia. One man, 75 years of age, natural causes. One boy, 16 years of age, inflammation of the bowels. The others were, three from summer complaint, ranging from two to four years of age. One from cholera-infantum, two months of age. One from tonsillitis, two months of age. One from acute indigestion, at one month, and one baby three months and one eighteen months old of which no cause is given.

The walls of these houses are about 1-inch thick, and unlined. The doors and window casing are loosely set. The wind blows up under the floors; and one morning after a severe blizzard, when asked if I had kept warm, I told my friends that I did by running out doors and getting warm between times of building

fires. During the coldest nights, myself and family slept for the first time in years with our bedroom windows closed, as we got plenty of air without having them raised.

One portion of this town, containing about 160 people, is an old station and postoffice, which has been in existence many years. I find that six of these sixteen deaths occurred in the old town of permanent residences, leaving a total of ten in the two years in the new town of, say, 700 people, housed in little more than tents.

Now, the reason for this, I am not attempting to give—whether it is that the dampness caused by "capillary attraction" protected the people against themselves, by furnishing the necessary moisture (as their heat was almost entirely soft coal, and no attempt made to provide moisture) or whether it is the fact that there, on this broad prairie skirted by hills, the constant inflow of pure air in these houses has been the cause of such healthy conditions, I can not say.

I think there is herein, however, something for the medical profession to investigate. A careful comparison between the death rate of Lomax and of older communities near by, shows a mortality record in the older community of nearly four to one over Lomax. Taking into consideration the houses, the fact that the people live by soft coal fires—hot one minute and cold the next—and without any modern appliances for preserving sanitary conditions, I think there is, as I said above, an opportunity for study by the medical profession into the reasons thereof. In other words, we humbly ask our many advisors, why don't we sicken and die?

Proceedings of Societies

TRANSACTIONS OF THE CLINICAL SOCIETY OF THE NEW YORK POST-GRADUATE MEDICAL SCHOOL AND HOSPITAL.

(Stated Meeting, February 20, 1914. The President, John J. Moorhead, M.D., in the Chair.)

"Recent Results with Typhoid Vaccination."*—By Major Frederick F. Russell, Medical Corps, U. S. A., New York, N. Y.

Autotyphoid vaccination has been used in the Army since the early part of 1909, and the results obtained can best be shown in the three following charts:

Chart No. 1 shows the admission rates per 1,000 (that is, the number of cases) for each year from 1901 to date.

The best record obtained by sanitary measures alone is noticed in the year 1908; vaccination, beginning in 1909, has steadily diminished the number of cases, until in 1913, the rate was reduced to 3 cases per 100,000 men. What this signifies may be appreciated when one realizes that the civil *death rate* (not case rate), in the registration area of the United States, was 16.5 per 100,000 of population for the year 1912, the last for which the statistics have been published by the Bureau of Census.

In Chart 2, giving the death rates for typhoid fever, we see the best record previous to the introduction of vaccination was 0.19 per 1,000 made in 1907; this has now been far surpassed by the truly remarkable record of no deaths whatever from this disease in 1913.

Chart No. 3, presents a quantitative measure of typhoid fever, in what is called the constantly non-effective rate; this is a state-

*Abstract of remarks delivered before the Clinical Society of the New York Post-Graduate Medical School and Hospital, Feb. 20, 1914.

ment for each day during the year of the average number of men per 1,000, incapacitated for full duty by typhoid fever. This ratio is generally acknowledged to be the truest statistical measure of the loss of efficiency from any given cause. The lowest rate obtained with sanitary measures alone was 0.5 in 1908; this has been rapidly reduced to 0.003 in 1913. In other words there was in 1913, only 1-166 of the loss of time from duty because of typhoid fever which occurred during the record year, 1908, before the introduction of vaccination. These three charts are absolute proof of the efficacy of the typhoid prophylactic.

Have any harmful effects been produced by the typhoid prophylactic? This question may be definitely and decisively answered by the plain statement that no harmful effects have been produced. In the Surgeon General's Annual Report are records not only of typhoid fever, but of all other diseases affecting soldiers' health. Since the Annual Report itself may be consulted by those interested in the subject, in almost any medical library, reference will be made here to two points only. First, the diseases which were more prevalent during 1912 than during the decade ending in 1911, and second, what, if any, has been the effect of vaccination on the rates for tuberculosis?

In answer to the first question we find the report of the Surgeon General states that only eight statistical groups of diseases, show an increase in the case rate per 1,000; these are eruptive fevers, other than measles, smallpox and typhoid (1.90 to 3.65); diphtheria (.49 to 1.01); mumps (11. to 16.99); cancer and other malignant growths (.21 to .22); diseases of the brain and spinal cord (2.90 to 4.09; pleurisy (3.03 to 3.22); tonsillitis and other diseases of the pharynx (64.78 to 65.33); and appendicitis (4.54 to 6.59). There is no reason for believing that the antityphoid vaccination is anyway responsible for these changes. In answer to the second question we find that the case rate for tuberculosis of all kinds shows a decrease from 4.51 per thousand for the decennial period ending in 1911, to 3.49 for the year 1912; a decrease of 22 per cent. On page seventy of the same report is given a tabular statement of all forms of tuberculosis occurring in enlisted men for each year from 1908 to 1912. This table

shows, also, not only that tuberculosis has not increased since the introduction of typhoid vaccination, but that it has actually decreased; a result due, no doubt, to improved sanitation and to the care used in the physical examination of recruits.

TABLE I.

Tuberculosis, all kinds, enlisted men only. · Case rate per 1,000.

Year	United States	Philipine Islands	Alaska	Hawaii	Transports	Total
1908____	3.99	6.10	2.96	3.92	3.46	4.39
1909____	4.53	5.06	3.76	2.96	3.00	4.53
1910____	3.34	5.46	1.85	4.10	0.80	3.65
1911____	3.64	3.77	2.68	1.99	1.76	3.55
1912____	3.25	5.02	4.18	2.07	2.74	3.59

The rate per 1,000 has decreased from 4.39 in 1908 to 3.49 in 1912, a diminution of 20 per cent during the past five years.

From the tables and charts here given the conclusion is inevitable that prophylactic vaccine as used in the Army has given almost absolute protection against typhoid fever without producing untoward effects of any character, showing definitely that the vaccination is both efficient and harmless.

The question of living and sensitized vaccine has recently become important. Metchnikoff and Besredka have immunized many apes and found that killed typhoid vaccine did not give sufficient immunity to protect them against subsequent experimental typhoid; in their opinion dead vaccine was of little value and a living sensitized vaccine seemed necessary to protect the apes. While this may be true, it has very little value for us, since we deal with men and not apes. We have vaccinated over 300,000 men and know that vaccination with killed cultures does give almost absolute protection, and there is, therefore, no necessity for using sensitized living vaccines to secure greater protection.

Are there any other reasons why a sensitized vaccine, either living or dead, might be desirable. There is, perhaps, one reason—it may produce milder reactions. Our experience with sensitized vaccines has been limited, and so far as we can judge, the degree of reaction is about equal, and nothing is to be gained by the

use of sensitized vaccines. Further experience with sensitized vaccines may show some advantages not now apparent.

"Further Observations of the Thompson-McFadden Pellagra Commission Upon the Epidemiology of Pellagra."*—By J. F. Siler, M.D., P. E. Garrison, M.D., and W. J. MacNeal, M.D. New York Post-Graduate Medical School and Hospital.

Pellagra is a very definite pathologic entity characterized by typical lesions on the skin, by gastro-intestinal derangement and by disturbance of the nervous system. This disease is already very prevalent throughout the Southern United States, and cases have been observed occasionally in nearly every state in the Union. In Spartanburg County, South Carolina, we have been able to gather data concerning about 800 cases, the great majority of which have originated in the last three years.

In Spartanburg County, pellagra attacks all classes of the population, but more especially the women and children living in the cotton-mill villages. Pellagra morbidity in males between the ages of fifteen and forty-five is very low.

A statistical study of the food used in six of these mill villages, including about 5,000 persons, failed to reveal any consistent relationship between the use of any particular food and the occurrence of pellagra. A somewhat similar statistical study of the location of domicile of old cases of pellagra in respect to the domicile of the remaining population in these mill villages has shown that pellagra developed almost exclusively in persons living in the same house with such antecedent cases, or next door to them. In other words, the disease spread from a preceding or antecedent case as a center, a phenomenon which can be explained satisfactorily only by assuming that pellagra is an infectious disease. Apparently it is not readily transmitted to any considerable distance.

So far as we have observed, pellagra spreads most readily in

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*Abstract of remarks delivered before the Clinical Society of the New York Post-Graduate Medical School and Hospital, Feb. 20, 1914.

communities using unscreened surface privies. In those portions of the city of Spartanburg equipped with a water carriage system of sewage disposal, new cases of pellagra were few, and in two mill villages, completely equipped with water carriage sewer systems, it was impossible to find cases of pellagra which had certainly originated there. Individuals suffering from pellagra contracted elsewhere were not lacking in these communities. Practical experiments in the prophylaxis of pellagra along the lines suggested by this work are being undertaken this present year.

Discussion.

Dr. John W. Brannan: I have been asked to tell something of our experience with inoculation of antityphoid vaccine in civil life, especially of what we have been doing for the last two years in some of the city hospitals, mainly with the nurses, and also with the members of the house staff. The nurses were quite ready to co-operate, especially the pupil nurses, but the internes were inclined to object to the operation.

I am familiar with Major Russell's work, and am very glad to hear him say that he has not seen tuberculosis following the typhoid vaccination. Antityphoid inoculation has been carried on for several years in the hospitals in Massachusetts. Two men, Richardson and Spooner, began inoculating the nurses in the Massachusetts General Hospital four years ago; they had previously collected figures and had found that for some ten years back there were from two to six nurses each year in that hospital who had typhoid. Since they have been inoculating, no nurses have contracted the disease, although there has been about the same amount in the wards. From the Massachusetts General Hospital, the practice has spread throughout the state, and into other states, and there are now some thirty or forty, or more, hospitals in the country which are doing it.

When I first suggested doing this work in June, 1912, I found that the heads of the Training School at Bellevue were doubtful as to its necessity. It was their belief that we had had very little typhoid among the nurses, and this proved to be true. We have

had only one or two cases a year, which speaks very well for the sanitation of the wards. However, inoculation was begun and about a year ago I reported the first year's experience. At that time I had inoculated two or three hundred nurses, and sixty or seventy of the house staff. Of the first group of ninety nurses at Bellevue when I began the work—it is entirely voluntary—seven refused inoculation. One of these came down with typhoid, none of the others. The effect of the one case was very marked. From that time on the nurses were very much more willing to be inoculated, as were also the members of the house staff. Since that time we have had three more cases among the uninoculated.

Several things have caused me some apprehension while carrying on this work. Some two or three months after I began, Sir Almroth Wright published his views about the "negative phase," and I feared that I might meet it, especially as the nurses were exposed to typhoid throughout the period of inoculation, but in the next six months the men in the same class as Wright disposed of the "negative phase," and nothing happened to the nurses.

Then came the tuberculosis theory. Nothing was said of it to me in the hospitals, but I felt pretty sure that some of the doctors and nurses had read it. I have seen nothing of the sort, and yet it must be that during these two years I have inoculated some persons who have had a predisposition to tuberculosis. I have made it a point not to ask the nurses what disease they have had, but have requested the nurse who assisted me to make a record of what occurs. Up to now I have inoculated between 500 and 600, and in that number we have had no markedly bad symptoms. Perhaps if some of the persons treated were here they might differ with me, but we certainly had more than Major Russell, especially in the young men. There have been cases of temperature running to 102° or 103°, with chills and pains. One man, one of the neurologists at Bellevue—they seem especially sensitive—told me that he had had a temperature of 103°, with intense pain in the abdomen, and was obliged to stay in bed—yet he had only received one-half cc. I saw him after the second inoculation—also only one-half cc.—and he surely was a very sick man—high temperature, pains, and chills, that lasted for two or three days.

He begged off the third dose, and I agreed. At the same time I inoculated other men of his age, and they had practically no symptoms. I had been inoculated myself, before beginning the work, with the same vaccine that Major Russell uses, and had three doses. The arm was sore after each inoculation and a little stiff, with a patch of redness about the size of my hand. In addition to that, I had a little pain in the back and a slight rise of temperature, headache and malaise—and that was all—lasting for about thirty-six hours. That is what we get in the great majority of cases.

Some of the nurses this year, complained rather more of headache, malaise, temperature, etc., and occasionally one would take a day off, but they generally were satisfied with two or three hours' rest in the afternoon of the day of the inoculation.

In looking over the records today, I was rather interested to see that a group of symptoms would run through the nurses in one hospital, and another group in those in another, although the vaccine and the vaccinator were the same. Here is a group in Harlem, who had no constitutional symptoms. The next group had headache, backache, chills and malaise. The next group had general maialse, with abdominal pain and nausea and vomiting. One nurse at Harlem noticed rose spots on abdomen and chest with more or less fever twenty-four hours after third dose, with tenderness and pain in abdomen. The rash lasted twenty-four hours. When I came to Bellevue I found that although the symptoms are not more severe many of the nurses this year have had nose-bleed. It seemed that after one or two had nose-bleed the others all had it. Many of them stated that they had had "all the symptoms of typhoid fever." In no other hospital have they said anything about typhoid. I asked if any of those who had had these symptoms had had any rash, and the reply was: "No rash, but a blush covering the body in one case."

I have said that doctors as a rule are rather refractory. Here is a group of nine nurses and three doctors. I will read what the nurses said, for it will give you a line on the doctors. The first two nurses complained of nausea and chills, and sore arm. The third had chills and a sore arm; another had chills, back-

ache, headache and sore arm, after the first dose and vomited three times, and had great abdominal distress after the second dose, but they all took all the doses. The remainder of the nurses had no ill effects, with the exception of sore arms. But, continues the report, "the doctors, I am sorry to say, fell out after the first and second doses."

Dr. Russell says that he has found it the same in the army. These are young men, but the older men also do not seem to desire it. Most of them claim that after the age of forty-five years it is not necessary. The attitude of Miss Noyes, the Superintendent of the Training School, has had a great deal to do with the nurses taking hold of it. Bellevue, as a rule, does not welcome new procedures. I think we were the first hospital in New York to do it. She was not in favor of it at first, but after the case of typhoid among the seven who refused, she favored it, and since then we have had no trouble with the pupil-nurses. Our situation is somewhat peculiar. We have 300 nurses, and only about 100 are pupil nurses. We have to depend on nurses coming from other hospitals to take special courses that they cannot get at home. These nurses come for only three or six months, and we cannot persuade most of them to take the inoculation, and we must have the nurses . . . I have tried to insist that no nurse may take care of a typhoid case without being inoculated. Then there are other nurses who are foreign—two or three Danish nurses who insisted that they had been so trained in sanitary precautions that there was absolutely no danger of their acquiring the disease. I explained that when they traveled or went about the country they were in danger, in spite of what they might do, but I did not succeed in persuading them. On the other hand, we have had one or two Danish nurses who asked to be inoculated.

Miss Noyes said that at the meeting of the Hospital Superintendents' Association last year the question was asked as to what hospitals in the country are now doing with inoculation and about thirty replied in the affirmative; but in no hospital is it required. It is still voluntary. I hope that in a few years it will be compulsory, and especially in the case of the house staff. One interne

was inoculated at Gouverneur two years ago, and about a year later came down with typhoid, and since then I have had even more difficulty in that hospital in persuading the men to be inoculated. I presume we shall have to expect such cases, just as we do mild smallpox and varioloid. I do not see anything to contraindicate inoculation.

In one or two instances nurses have had rheumatic arthritic symptoms after inoculation, but of short duration. That has also been noted in the Massachusetts General Hospital.

Dr. H. D. Corbusier: Not much has been said about the use of antityphoid vaccination in private practice, and most men are interested in that subject. I have had a little experience, and having heard of Major Russell's work I took it up. Being interested in the National Guard, I have endeavored to get most of the men to allow themselves to be inoculated, and some of the states have succeeded in inoculating a good many of the men. In my state, New Jersey, many men have been inoculated, but not so many as I could wish for. It should be made compulsory, and physicians should use their influence in persuading men as far as possible to be inoculated before going into camp. That may seem to be a purely military expedient, but it is not, for often when men come home from the camp they bring home typhoid fever and spread it among the communities in which they live, whereas if they were inoculated they would not do so.

About the reactions: In most of the men whom I have inoculated there have been no reactions whatsoever. Of course, these men were not up to the physique of the regular army men. In private practice, the reactions have been mostly in women. Dr. Brannan's cases were exceedingly interesting to me. I would put down 45 per cent of these symptoms as purely hysterical from th fact that a patient would call up the next day and report a "reaction," a very sore arm and a headache perhaps. . . . Mrs. B. would be inoculated, and the next morning she would have very similar symptoms. But the *real* symptoms that I have had amongst women have been very few indeed. One thing that is the cause of this hysteria is the fact that the syringes in which this vaccination is put up are not quite what they should be.

Many of the needles are entirely too large, and when they are pricked into the arm, a sensitive woman will feel it a good deal, and this pain often spreads all over the body, in imagination at least; whereas if a small needle is used there will be very much fewer "reactions."

Dr. MacNeal: In many discussions on pellagra one of the questions asked is: "What microscopic evidence is there to indicate the infectious nature of the disease, or to show that it is due to any other kind of causation?" It would seem that when one asks such a question he fails to realize that in every disease it is first necessary to observe the condition of the patient. The disease must first be studied as it occurs naturally, to learn something about the natural circumstances under which it arises and is distributed, before any one can know where to look for the cause. Many who have not thought very much about it assume that all that is necessary is to put a section of tissue from the human body under a microscope in order to demonstrate the cause of a disease. That is a fallacy. The microscope not only magnifies the things one is looking at, but it magnifies the spaces between the different objects, so that unless one knows where to search nothing is likely to be accomplished.

The attempts at pathological work, aside from the general histological and anatomical examinations, have been made upon the assumption that some parasite would be found in this or that particular spot. Such a guess, if it should prove to be correct, would doubtless advance very much the solution of the problem, but work of this kind has not yet led to success.

It has been necessary to do the work of which Dr. Siler has spoken in order to ascertain where to search for the cause of the disease. It would be fruitless to search for the microbic cause in the skin if it should be proved by other evidence to exist only in the intestine, and a waste of time to search in the intestine if it should be proved to exist in the blood and to be transmitted by insects. If we can ascertain some facts which indicate its location in the body, we can search there. It would be absurd to search for a specific infectious agent, if pellagra should prove to be associated with the use of some particular kind of food or to

be due to some particular food constituent. For this reason the commission has been justified in laying great stress on the observation of the disease as it exists in the field.

We have not, however, neglected other researches, but most of the investigations along other lines may be regarded more or less as stabs in the dark. So far, all these researches have resulted in failure as far as elucidation of the essential causation of pellagra is concerned.

These studies have included examination of the blood in a large number of cases, a study of metabolism in a smaller series of cases, and rather extensive examination of the intestinal bacteria. We have also had opportunity to examine clinically a large number of pellagrins and to follow the course of the disease at their homes and in the hospital.

Other questions commonly asked are the following: "What is the death rate? What is the chance of recovery? What prognosis can we make in pellagra?" It is very difficult to answer these questions. Cases in children under ten have a good prognosis. Nearly all of them seem to recover. We have had in our series only two deaths from pellagra in children under ten years of age, although the disease has been very frequently observed in children. In persons over twenty years of age, the death rate is much higher. From 5 to 15 per cent die in the first attack, and a similar proportion succumb in each of the subsequent recurrences. The remaining 85 to 95 per cent recover from the single attack of the disease, but probably about 90 per cent of them will recur the following year. The other 10 per cent will not recur, but may remain free from further manifestation of the disease. The prognosis is, therefore, not very favorable for ultimate recovery, although a certain percentage will recover each year.

The conditions which determine the prognosis seem to be largely economic. If the patients can pay physicians, have the proper environment, and proper climate and nutrition, the prognosis is fair; but if the patient has to remain in the same environment, and go on as before, the prognosis is bad. The situation is very much the same as with tuberculosis. The disease may be arrested under the influence of better environmental conditions,

but upon return to the former environment it will almost certainly recur, and will recur even under improved conditions if the patient does not take care of himself.

Dr. Moorhead asked about the medicinal treatment of pellagra.

Dr. Siler replied that a number of things have been recommended. The most usual treatment and that which appears to give the best results consists of arsenic preparations. All do not agree about that, and it is not claimed that arsenic has any specific effect. The best time to give it is during late winter and in early spring before the symptoms of the disease appear. If the patients can be gotten in good condition in the spring and kept so, they are quite likely to miss the attack the next season. It was found that women who have had pellagra, if pregnant during the summer months, about 75 per cent will not have symptoms during the period of pregnancy. The important thing is to build up the resistance. Of course, food is an important factor. The nutrition should be increased, but there is no specific treatment for pellagra. If you can give the patients fairly good food and tide them over the worst period during the summer, the chances are that they will recover. The death rate is not now so high as it was a few years ago. Four or five years ago he saw a hundred cases and 50 per cent of them died. The death rate now is supposed to be 26 or 30 per cent, but he was inclined to think that the disease is not so severe as it was a few years ago.

Replying to a question in regard to the percentage of cases of hookworm associated with pellagra, Dr. Siler said that that depended on locality. There was a very small proportion of hookworm in Spartanburg County; the general percentage was not higher than 15 per cent. Farther down the coast where 75 or 80 per cent of the population were infected, hookworm was associated with pellagra. He had heard persons say they thought hookworm was a cause of pellagra, but that was because they were living where the percentage of hookworm infection was high. In Spartanburg they do not have hookworm disease, less than 15 per cent of the population being infected. This was the percentage determined by the laboratory examinations of the commission, and it corresponds with the reports of the Rockefeller Commission.—*The Post-Graduate.*

Selected Articles

ON THE RELATIONSHIP OF THE DUCTLESS GLANDS TO GROWTH.

Discussion.

By Arthur D. Dunn, M.D., Omaha, Neb.

Eugenics of late is becoming such a common topic of discussion, and the problem of evolving the superman is stalking so boldly into our drawing-rooms, that it seems not in apropos to discuss briefly certain glandular factors which influence growth.

Three things are requisite in all growth: First, the necessity for growth; second, food; third, the ability to grow. Growth is a necessity in all multicellular life. Every species has an optimum size which is best adapted for this species in the struggle to maintain itself in its environment; the tendency of all growth is towards this optimum. Individuals who do not approximate it tend to disappear, as, for example, the Australians and Tasmanians in the genus homo. Suitable food is admittedly necessary for all growth because growth is a manifestation of energy. It is not a form of energy, but the result of an energetic, and especially of a chemical situation (Friedenthal). An investigation of the third factor, namely, the ability to grow, leads us into a complexity of problems which are as yet largely unsolved. The protozoon is potentially immortal, dividing periodically and indefinitely into two new individuals. To be sure, at rare intervals the union of two cells occurs, which gives a new impetus to growth, and we find the sexual and asexual cycles, which are so well illustrated by the life history of the hematozoon of malaria. All higher forms require the union of cells from two parents to bring about the development of a new individual. The death of the parent individual follows in a longer or shorter period of time;

therefore, the immortality of the metazoa resides in their offspring.

The exact physico-chemical factors determining the phenomena of growth are largely unknown. In mammals, the activities of certain groups of cells or glands seem to have much to do with the ability to grow. It is with the relationship to growth of this *interlocking glandular directorate, which also profoundly influences metabolism and sexual life,* that this paper has to do. We will consider merely the functions of the hypophysis, thyroid, thymus, and of the interstitial cells of the testicles and ovaries, as they effect the problem of growth. Other physico-chemical correlations are certainly at work, modifying and determining growth, but as yet our knowledge of them is so defective that such correlations may here be omitted.

The Hypophysis.—The relationship of the hypophysis to growth has of late been intensively studied. In 1886, Pierre Marie first directed attention to this hidden gland as having to do with acromegaly, although he not surprisingly attributed the disease to a destructive lesion. Observations have gone far to fix the cause of acromegaly in a hyperfunction of the pars anterior. The fact that destructive lesions are often found at autopsies after the condition has become stationary, does not disprove hyperactivity during the development stage. The operative cases of Hochenegg and Exner are experimental in their precision. Operative removal of the pars anterior in recent cases of acromegaly resulted in a regression of the anatomical manifestations. Today gigantism is considered as a result of *hyperpituitarism.* In acromegaly the period of activity occurs after epiphyseal ossification is complete; in gigantism the hyperactive stage occurs in childhood or adolescence, before ossification is finished. As the terse phraseology of Launois and Roy has it: "Gigantism is the acromegaly of subjects with unossified epiphyseal cartilages, whatever their ages may be." In giants, we find many of the osseous phenomena of acromegaly, such as prognathism, large sinuses, thick skulls, and enlarged and usually eroded sellæ. Giants and acromegalics show the same tendencies to lethargy, to slow cerebration, to physical weakness and exhaustion, and to sexual im-

potency. Other physico-chemical combinations of the pituitary are also disturbed, and the life phenomena of acromegalics and giants bear a striking resemblance to each other.

An interesting contrast to the above is revealed by the results of *hypopituitarism* effective during the growth period. Certain cases of infantilism are quite likely the result of pituitary deficiency. These are the "adults in small mould," the true microsomic dwarfs, the antitheses of the giants. I have had an infantile under observation whose sella turcica measured 7x9 mm. Her hands and features were delicately chiseled, and although a woman of thirty-two, the expression was girlish, and the body was that of a maiden passing into womanhood. Another form of hypopituitarism has attracted much attention since its description by Frohlich in 1902. It is characterized by *obesity, hypotrichosis* and *retarded development of* or *absence of the secondary sexual characteristics.* Frohlich named this condition *distrophia adiposogenitalis.* Its counterpart with all the salient features have been produced experimentally in dogs by hypo-physectomy (Cushing). Post-mortem observations quite definitely associate the condition with a destructive lesion of the hypophysis. A most interesting combination is the association of this pituitary defect with absence, or marked diminution, of the *stroma cells of the testicles and ovaries,* to which cells is attributed the somatogenic phase of the sexual impulse. Thus, in addition to modifying the growth of the individual, we find the hypophysis reaching out to prevent the reproduction of individuals in whom its functionings are abnormal. *Through its correlations with the testicles and ovaries, and possibly with other organs, it creates impotency and dulls sexual desire—a beautiful phylogenetic protective mechanism.*

Inasmuch as morality in the common mind has not yet been divorced from sexuality, the above relationship has an instructive corollary for the "moralists," to wit., the conception of "morality" in some instances as a phase of disease. It should be unnecessary to state the converse.

The Thyroid—Cretinism.—The association of cretinism and thyroid disease has long been appreciated in regions in which

goiter is endemic. It has been noted that wherever goiter is prevalent, cretinism is common. It is stated that there are 15,000 cretins in Switzerland alone. "The outcome of a host of researches has been the recognition of the enormous importance of the internal secretions of this gland, which is essential for the normal growth of the body in childhood and for the maintenance of the proper metabolism of the epidermic tissues and of the brain" (Osler). The thyroid early received much attention in the study of growth anomalies and its relationship to disturbances in growth is quite well known. This gland in cretins is found to be atrophic and its colloid thickened. In many instances the gland is fibrous. Goiter is present in 63 per cent of cases (Vogt). The histo-pathology of the thyroid in these cases points to a hypofunction, resulting in a peculiar form of dwarfism, which varies markedly from the types associated with pituitary and thymic insufficiencies. The most striking feature of cretinism is a disturbance of growth, which affects the cutaneous and osseous systems. There is arrested or retarded bony development. The skull is small, the base is materially shortened (Virchow), the forehead is low, prognathism is marked, and the nose is retroussé. The pelvis is often small and irregularly shaped. The stature averages from 1 to 1.5 m. The appearance is quite characteristic and the typical case is easily recognized by anyone who has studied photographs. The heavy, coarse-skinned face, the thick-lipped, drooling mouth, the imbecile expression, and the pudgy figure contribute to a picture which is easily of recognition. The hair is coarse and short. In males, the beard is thin or absent. *The secondary sex characteristics are not developed.* The pubic and axillary hair is absent, the penis and testicles are small. The uterus and ovaries and external genitalia are infantile, and in both sexes the organs are ill-fitted for procreation. The sexual instinct is absent or weak. Often there is little of maturity before the fifth or sixth decades.

We again see the race protected by a chemical correlation. The subjects of thyroid insufficiency are illy adapted to the struggle for existence, and are unable to contribute to race progress. They are retrogressive types. An *irresisible hidden force, stronger than*

human-made laws, takes the problem of their propagation out of our hands, and, by a finely adjusted physico-chemical interglandular correlation, renders them incapable of perpetuating their kind.

The Thymus.—The thymus is probably the most important of all the ductless glands in its influence on growth, and at the same time its exact function is least well known. Its evolution and involution follows the growth cycle. Its average weight at birth is 13.26 gms.; from the first to the fifth year, 22.98 gms.; from the eleventh to the fifteenth year, 37.52 gms.; then its size gradually diminishes until the sixth and seventh decades, when its weight averages about 6 gms. It is the only gland in the body that attains its maximum size at the height of the growing period. It must *a priori* have to do with the function of growth. It is the most sensitive of all organs to the nutritional status of the individual and its volume so closely corresponds to general nutritional conditions that Shali speaks of it as the "graduator (Gradmesser) of the state of nutrition." Experimentally, this gland has been proved to be associated with calcium metabolism. Basch found more calcium excreted by dogs in the first weeks after thymectomy than in normal animals. According to Klose and Vogt this phenomenon is the result of an acid intoxication. Basch believes the thymus to be closely associated with the thyroid in its functions. Removal of the thymus in dogs (herbivora are not well adapted for experimental work on account of early ossification) causes marked disturbance in ossification and growth. Three rather well defined periods or varying length occur in thymectomized dogs: (1) Latency; (2) adiposity; (3) cachexia. The growth of the animals is retarded. They are sluggish and bony changes similar to rickets appear. They walk on the whole foot. The hind legs are weak, and both extremities are deformed. The bones are osteoid and typical "rosaries" may be formed. There is enlargement of the epiphyses and the bones are soft and pliable. "The changes in the osseous systems permit of identification with rickets on a purely morphological basis" (Matti). It was not noted that ovulation or spermato-genesis was affected. There is hypertrophy of the hypophysis and of the

thyroid of the pancreas and of the chromaffin part of the adrenals after thymus extirpation. Post-mortem observations to determine the relationship of the thymus to rickets have not been made.

If perverted thymus function is the determining cause of rickets, and the recent experimental evidence points that way, we have another manifestation of a ductless gland exerting a profound influence on growth. Its intimate relations to the chromaffin system, to the other ductless glands, and to the sexual organ, although poorly understood, is manifested in the status thymico-lymphaticus. Sexual activity is not dulled in rachitic dwarfs to any great extent, as in cretinism or hypophysis disease, from plevic deformitories in the female. It is with this type that of physically undesirables. It is interesting to note how much more certain and relentless is the check to reproduction by *interglandular correlations* when both defective cerebral and physical development is concerned.

Achondroplasia, Chondrodystrophia Fetalis.—Achondroplasia is in direct contrast in its pathogenesis to rickets. In the former, there is a decided defect in epiphyseal cartilaginous formation; in the latter an excess. Achondroplasia has been attributed to disturbed thymic function, but this is unlikely in view of the probable bearing of the thymus on the etiology of rickets. The changes occurring in the line of ossification in the cretinic and achondroplasic dwarfs are similar, but differ in the fact that in the former the line of ossification remains open indefinitely; in the latter, it closes early, which results in an approximately normal trunk and short, "flapper" extremities. In the former, the genitals are atrophic; in the latter, they are normal. The chondrodystrophic is capable of procreation, although difficulties arise from pelvic deformities in the female. It is with this type that Marie de Medici and Natalie of Russia failed in their efforts to breed a race of dwarfs. The glandular determinants, if any, in achondroplasia are not understood.

The Interstitial Cells (Leydig).—Any discussion, however fragmentary of the correlative functions of the ductless glands in growth, is essentially lacking should we fail to consider the

stroma cells of the testicles and ovaries. The profound effect of castration on the development of mammals is common knowledge. The disproportionately long extremities, the redundancy of fat, the feminine voice in the adult man, the bearded woman, and the numerous abnormal psychic manifestations of castrates are well known. Johannes Brahms said he could nearly always distinguish a masculine woman from a feminine man by their playing, although he admitted at times at was most difficult.

The interstitial cells of the testicle were first described in 1850 by Franz Leydig; until 1900, they were considered merely as nutritive cells, whose function was to supply food stuffs, especially fat, to the maturing spermatozoa. Regaud, Policard and Loisel first regarded them as forming an *interstitial gland with an internal secretion.* Much experimental and clinical evidence has accumulated to support this view.

Roentgenization destroys the germinal cells and leaves the interstitial. *Potentia generandi* disappears, *potentia coeundi* remains normal. Growth and secondary sex manifestations and characteristics are not affected. Sterilization of women, without the unpleasant symptoms which follow castration, has recently been accomplished on therapeutic grounds by roentgenization.

In *cryptorchids* spermatogenesis does not take place, although the development and sex characteristics are normal.

Vasectomy destroys the tubules, the stroma remains intact.

Steinach has shown in his ovarian and testicular transplants that he can at will change the sex characteristics, with the corresponding growth phenomena, in guinea pigs and rabbits. Microscopic examination of the transplants shows that the germinal cells have disappeared and the interstitial cells remain.

The maximum amount of stroma is observed in animals at the breeding season. Tandler observed that in moles in December almost no stroma was present, while in June it constituted the major part of the testicle.

It is evident from the above that the way the germinal glands influence growth and metabolism is by the powerful influence which their hormones exert on the osma. As Tandler so well puts it: "The hormonic collaboration of these organs (germ glands,

thyroid, thymus and hypophysis) times the normal entering into maturity of the individual. This is characterized by the completion of growth, the establishment of sexual potency and the appearance of the secondary sexual characteristics."

Our purpose in this paper has been to give a rough illustrative sketch of the hormonic correlations of certain ductless glands as manifested in growth phenomena. We are often seeing in practice abnormally developing children and abnormally developed adults who come to us for explanation and help. Of help there is some, of explanation there should be much forthcoming. Study of the problems of growth is sure to bring much of economic, social and therapeutic value to society.—*The Lancet-Clinic.*

Extracts from Home and Foreign Journals.

SURGICAL

Fistula Ani.

In the *Munchener Med. Wochenschrift* for January 27, 1914, is the report of 72 cases of anal fistula operated by Professor Krecke in his private sanitorium from 1896 to 1911. The interesting points in the record are the method of operating and the results, also the fact that only 5 per cent of all the fistulas were tuberculous, the explanation being that the patients were all of the better classes and well nourished, while the statistics which show the high percentages of tuberculous fistulas generally emanate from the free hospitals and hence deal with a entirely different class of patients, a point to my mind very well taken.

The method of operation consisted in excision of the fistula in healthy tissue with any offshoots that might be found and then allowing the wound to heal by granulation. Nearly all the fistulas, however, were superficial to the sphincter ani, which accounts for their easy excision. The cutting of the sphincter was carefully avoided as a dangerous procedure (naturally in the face of the large excision wounds). Even at that, however, in 56 patients from whom the history was obtained, three had complete and 10 incomplete incontinence. This would go to show that after all the good old-fashioned simple cutting of the fistula is the best, even though the author reports that every fistula was cured and that there were no recurrences. But at what a price to cure fistulas that apparently were rather simple: 13 incontinences in 56 patients or 23 per cent! That is certainly something to chill the greatest enthusiasm. It has even caused the operator to pause and wonder whether even 100 per cent cures at an expense of 23 per cent incontinence is not a rather high price to pay for any

operation. However, all honor to the man who has the nerve to publish his results and tell the truth!—*Pacific Medical Journal.*

Ether Dressings.

Condamin recommends the application to the abdomen in inflammatory edema of the pelvis, subacute phlegmon, and similar conditions, of cotton pads saturated with ether and covered with more cotton and oiled silk. These ether dressings have a sedative action, reduce pain and the absorption of edema is promoted. An ether tampon may also be applied inside the vagina, but this is somewhat painful. He has been using for several years these ether-soaked compresses over a large area, and with constantly increasing satisfaction. The ether has to be continuously applied and in no small dosage.—*The Journal of the Am. Med. Asso.*

Gangrene of the Lung; Operation and Recovery.

Dr. Abraham Mayer reported this case. The patient was a man 36 years of age, born in Italy, and admitted to Lebanon Hospital September 11, 1913. His family history was negative, his father dying of intestinal trouble at the age of sixty and his mother of pneumonia at the age of eighty years. The patient had never before been ill. Twenty-four days before his admission to the hospital he had been suddenly taken sick with a severe chill, followed by high fever. He had severe pain in the right chest with each inspiration. Expectoration, at first slight, became progressively more and more profuse. He was at first throught to have lobar pneumonia, but did not seem to have any crisis. At the time of his admission to the hospital he was only fairly well nourished, looked ill, and had a hot, dry skin. His heart percussed normally as to position and size. The sounds were of good quality and there were no murmurs. The expansion of the lungs was only fair and appeared equal. On the left side there was normal pulmonary resonance, both anteriorly and posteriorly. The respiratory murmur was normal. On the right side posteriorly and just below the angle of the scapula there was an area of

dullness, with entire absence of breathing. Radiating from this point as a center moist rales were present over the entire side anteriorly and posteriorly. Examination of the abdomen and the extremities showed no abnormalities. The sputum was very profuse, fetid, and greenish-brown. It contained shreds, and on standing settled into two distinct layers—the lower greenish-red or brown, and thick, the upper more abundant, pale and thin. When fresh it had a frothy layer which disappeared after standing from twenty-four to thirty hours. Microscopically no tubercle bacilli were found. There were many bacteria, granular and fatty matter, and many crystals. There were few elastic fibers. The first X-ray was taken September 15, 1913, and showed a large area on the right side affected. On account of the wretched condition of the patient the operation of opening the chest wall and evacuating the gangrenous material was divided into two stages. The preliminary operation was done on September 19 and on September 22 the operation was completed. Foul-smelling, grumous material and lung detritus were found. The cavity was the size of a lemon and extended to the root of the lung. The patient made a complete and uneventful recovery and was discharged cured thirty-seven days after admission to the hospital. Dr. Mayer exhibited the X-ray plates and a specimen of the sputum.—*Medical Record.*

Value of Pituitrin in Surgical Shock.

The author noted a marked effect upon the blood-pressure in patients to whom this product was given before they left the operating table. In an illustrative case, at the beginning of the operation the blood-pressure was about 105 mm. Hg, but dropped to 80 a short time after the abdomen was opened, and held approximately at this point throughout the operation. After the first injection of pituitrin in this case, before closure of the wound, the blood-pressure increased to 85 and then to 90 within a short time. At this point a second injection of 10 minims was given, and forty-five minutes later the pressure registered 110. The pulse rate dropped in proportion to the increase in blood-pres-

sure. No evidence of shock was noted although the operation had been rather protracted.

All the author's patients, before leaving the operating room, receive pituitrin, 15 minims, hypodermically. After recovery from anæsthesia, the following measures are used: (1) Fowler position—fifteen inches of elevation of head of bed. (2) Enteroclysis, using glass nozzle with two or more openings. (3) Hypodermics of pituitrin, 15 minims every three hours for 4 doses. (4) Ice caps to the abdomen. (5) Sips of hot water and hot tea; no cracked ice or cold water for the first twelve hours. (6) Hypodermics of morphine, 1-6 grain, and physostigmine, 1-75 grain, for pain or restlessness, to be repeated in three hours if necessary. (7) If blood-pressure is below normal, continuation of pituitrin and addition of hypodermics of camphorated oil, 2 grains every three hours. (8) Catheterization, if necessary, only every eight hours. (9) Water, coffee, tea, orange juice, meat juice, and broths may be given before first bowel movement, after which milk and soft diet may be allowed.

In 800 abdominal operations in which pituitrin was used, the author did not in any instance witness a symptom of shock except in two or three cases, in which a condition simulating "heart exhaustion" was noted. Whether or not this apparent exhaustion was due to overstimulation is a question; many other factors may have been responsible. The symptoms were only transient, the patient responding to stimulation after the administration of pituitrin was discontinued, and in each instance making an uneventful recovery. The writer confirms the experience of others that pituitrin effectually removes gas from the alimentary tract and increases peristalsis.—C. A. Hill. in *Boston Medical and Surgical Journal*, May 15, 1913.

A Case of Disseminated Carcinoma of the Breasts and Axillae Improved by Radium.

The patient, a man, was referred to me by Dr. Beder. The right mammary gland and nipple had ulcerated away and there was another ulcer below that region. Both were adherent and

covered with a red parchment-like epidermis and were surrounded by an indurated margin projecting ½ inch above the level of the skin. Nodular masses larger than a hickorynut but smaller than a hen's egg were present in both axillæ and were widely scattered over the front of the chest. On the right side of the chest the skin over many of these was red, and they were evidently in a way to bread down into ulcers. On the left side the nodules were smaller, white, and extended from the nipple in a cord-like mass up into the axilla. The disease had been of several years' duration; no operation even for the removal of a microscopic specimen had been permitted. There was no history of syphilis, and two careful Wassermann examinations were negative. The clinical diagnosis had always been carcinoma, and if so it was evidently similar to the cases of epithelioma cicatrisans, which are sometimes active for as long as eight years before causing death. My patient had lost weight and strength, the skin was adherent to the chest wall, and the use of the right arm was interfered with.

Treatment was by contact applications of a mass of chemically pure radium sulphate containing 20 mg. of radium element having an activity of 20,000 microcuries, in a sealed glass tube 0.3 mm. in thickness, enclosed in aluminum 0.5 mm. thick and in thin, soft rubber. Treatments were three times a week for a month and after that once a week. At each treatment several individual nodules or parts of the nodular borders of the ulcers received an application equal to a total of fifteen minutes in each place. During the first month every growth on the right side had been treated in this way and also the floors of the ulcers, but the left side had not been treated. At the end of this time all the nodular masses on the right side were perfectly flat, and the cicatrized ulcers were no longer adherent but could be raised and bent double. The arm could be raised to the greatest extent. The patient felt stronger and had gained 5 pounds in weight. The left side, untreated, showed marked improvement, strengthening my belief that the application of the Roentgen ray and radium rays to cancer develops some antibody which is carried through the system

and in proper dosage produces benefit to cancer foci beyond the effective reach of the direct rays themselves.

Treatment was then begun on the left side, and the subsequent course of the case has been one of steady progress.—*The Journal of the American Medical Association.*

MEDICAL

Tuberculosis of the Breast.

John B. Deaver (*American Journal of the Medical Sciences,* 1914) has presented a very thorough statistical study of the subject by collecting and analyzing the cases reported since the last complete review, that of Anspach (1904).

Seventy-four cases are brought together and discussed from the standpoints of etiology, pathology, symptomatology, course, coincidence with other diseases, diagnosis and treatment. Of these forty-five are primary and twenty-nine secondary processes in other organs.

Very valuable tables are included in the paper, showing the relative frequency of occurrence of various symptoms, which are well described in the context. Statistics are also presented on age incidence, social condition, relative frequency of occurrence (less than 1 per cent of all mammary affections), sites of additional foci in the secondary cases and methods of treatment.

The portions of the contribution dealing with the pathology are exceptionally valuable. It is worthy of notice that of the entire series of seventy-four cases, in eight only was the diagnosis confirmed by finding the tubercle bacillus, either in smears or in stained sections, and in only two instances was guinea pig inoculation used. In other cases stained sections formed the basis for diagnosis.

Pain he finds to be a relatively infrequent symptom at the onset but during the course of the disease it was of more frequent occurrence, being especially noted just prior to the rupture of the abscess. He disagrees in these figures with Scudder, who states that "pain is an early and constant symptom, often severe in type,

and affecting 50 per cent of cases," but is in accord with Johnson in his work on "Surgical Diagnosis."

Certain observations, expressed tersely, should be stowed away in the memory, such as, "Any patient presenting a lump in the breast and complaining of pain on respiration in the region of the tumor should be skiagraphed for osteitis of the underlying ribs."

The difficulty of differential diagnosis between carcinoma and the sclerosing type of mammary tuberculosis is pointed out and the importance of using the tuberculin reaction is urged, in view of the fact that all cases of this group were diagnosed as carcinoma and accordingly submitted to a radical operation for cancer, whereas much more conservative measures would have been found adequate to effect a cure of the tuberculous affection.

The reported cases of coincidence of tuberculosis and carcinoma, seventeen in number, are analyzed to some extent.

The complete tabulation of the reported cases, with their histories, symptoms, clinical features and pathological characteristics, together with a full bibliography of the subject, combine to make this a most valuable contribution to the study of a comparatively rare disease.—*The Lancet-Clinic.*

The Part Played by the Suprarenals in the Normal Reactions of the Body.

Starting from the proposition that the existence of secretory nerves to the suprarenal glands may be regarded as definitely established, the author, at the suggestion of Starling, set out to investigate the action these fibers have on the form of the curve of blood pressure when the peripheral end of the splanchnic nerve is stimulated. The curve does not present a simple rise and fall, but has two summits. The splanchnics were exposed extraperitoneally, and all the nerves to the heart were cut. The second rise, as Lehndorff had already found, is accompanied by constriction of peripheral blood-vessels (even after denervation) and by acceleration and increased tone of the heart (likewise after denervation). The author finds that the secondary rise and all the

concomitant phenomena are due to the discharge of epinephrin into the circulation, and are absent after extirpation of both suprarenals. Every rise of blood-pressure brought about by the agency of the nervous system thus involves the coöperation of the chemical mechanism represented by the suprarenal glands.—*Monthly Cyclopedia and Medical Bulletin.*

The Favorite Formula or Pet Prescription.

Every physician, whether optimistic or pessimistic in his general attitude toward the materia medica, usually has a favorite formula—a certain combination of drugs which he uses for many and varied selected conditions. It is his favorite formula; here is mine:

℞ Codein sulphate	1	gr. ii
Acetphenetidin	75	gr. xii
Aspirin	2	gr. xxxii
Cinchonidin salicylate	5	gr. viii

Make eight capsules. One every hour or two.

With this formula, under appropriate conditions, the cure of patients becomes strictly a case of *cito, tuto et jucunde,* as we are admonished it should be. It will symptomatically cure grip, and if given on the first day will in many cases produce such an improvement by the second as to prevent its complications and incidentally—*malum in se*—do away with the doctor. I have used the favorite formula with satisfaction in most inflammations. There are other indications naturally suggested by its ingredients to which it seems excellently adapted and which it is unnecessary to enumerate.—Wilfred M. Barton, M. D., Washington, D. C.—*The Journal of the American Medical Association.*

Congenital Heart Disease; Probably Pulmonary Stenosis with Incomplete Ventricular Septum.

W. Essex Wynter reports the case of a man aged 26 who suffered from pains in both elbows and knees at the end of September, 1913, this being the only occasion on which he could recall

anything of the nature of a rheumatic attack. On account of the loud cardiac murmur he was kept in bed for several weeks, and finally sent to the hospital. The apex beat was just within the nipple line, and pulsation, with dullness on percussion, extended one inch to the right of the sternum. A loud systolic murmur could be heard over the precordia, the point of maximum intersity being in the fourth space near the sternum. It was so loud that it could be heard for some distance radiating from this point, but was best conducted toward the left clavicle in the course of the pulmonary artery. The second sounds were distinct, but not increased, and there was no diastolic murmur. The pulse was normal in character, neither small nor collapsing, and regular. Blood-pressure 170 mm. of mercury. There was no enlargement of the liver, no edema, nor any cyanosis, except during rare attacks of cardias disturbance, and there was no clubbing of the digitis. The patient had always suffered from shortness of breath on exertion; was never able to play games, and could not perform any arduous work. Blood count: Red cells, 6,512,000; white cells, 6,400; hemoglobin, 100 per cent; index, .08. The X-ray screen disclosed an enlargement of the right ventricle and a limited bulging of the conus arteriosus to the left.—*Proceedings of the Royal Society of Medicine.*

OBSTETRICAL

Early Operation in Cases of Uterine Fibroids.

The passive or expectant attitude was formerly quite generally observed with regard to the treatment of uterine fibroids, though of late not a few voices have been raised in favor of early operation. In the *Medical Press and Circular*, Feb. 18, 1914, Arthur E. Giles makes a fresh plea for early operation in such cases. He states that the possible reasons for the expectant method are: (1) That at the menopause the symptoms disappear and the fibroids tend to shrink. (2) That fibroids are not dangerous tumors. (3) That operation is attended by a high mortality insomuch that the

risk of operation is greater than the risk of leaving things alone; and that years of invalidism and disability are preferable to running the great risk.

Giles thinks that the first of these reasons is based on a succession of fallacies. One of these is the assumption that the only bad symptom of fibroids is hemorrhage. Hemorrhage is only one symptom, and morover it is a symptom in only some kinds of fibroids. The other symptoms, pain, pressure effects. disability, and general weakness, are not improved by the menopause and may be aggravated. The assumption that hemorrhage caused by fibroids is only menstruation, is one that could be excused only if made by a layman. The argument that fibroids shrink after the menopause will not bear looking into. Giles points out that in many cases they actually increase in size and in the few cases where a shrinkage occurs the effect may be worse than it was before, as a fibroid that lodged previously above the pelvic brim may become impacted in the true pelvis.

As for fibroids not being dangerous tumors the same may be said of ovarian tumors, the dangers of which lie in their possible complications. In the same way, the danger of fibroids, apart from the draining effects of hemorrhage, lies chiefly in their possible complications. Moreover if it could be truly said that ovarian tumors are dangerous but fibroid tumors are not, there still remains the question: Can we be sure, in any given case, that the tumor is a fibroid? Finally the argument based on the high mortality of operation would have had great weight 25 or even 20 years ago; this mortality has dwindled with the progress of abdominal surgery, and hysterectomy may now claim a recognized place, not only as an operation for saving life, but as a means for relieving suffering.

The author's reasons for early operation are as follows: (1) The age incidence of fibroids is so varied that no importance can be attached to age as an indication for operation. (2) Early operation would often allow of a conservative myomectomy, whereas delayed operation necessitates hysterectomy. (3) In a large proportion of cases fibroid tumors are associated with pathological complications, many of which are of a dangerous nature. (4)

Diagnosis is still so uncertain that grave conditions urgently requiring operation may be mistaken for simple fibroids. (5) The mortality attendant on the procedures of myomectomy and hysterectomy in the practice of experienced surgeons has become so reduced that operation may legitimately be advised for the relief of suffering, even when life is not directly threatened.—*Medical Record.*

Stenosis of Cervix Uteri.

After proper dilatation Mathews seizes the anterior lip of the cervix with a volsellum forceps; the lateral borders are grasped by tenaculum forceps; a straight scissors is used in dividing the posterior, or under lip, to the internal os. A curved needle with a silk or No. 1 catgut is introduced, catching the mucous coat and brought through, taking up the mucous coat posteriorly; the ligature is tied. The same procedure takes place on the two lateral surfaces of the wound. The vagina is packed with sterile gauze which is left in position twenty-four hours. The patient is placed in bed for ten days, after which she is allowed to return to her home.—*The Journal of the American Medical Association.*

Thyroid Origin of Hemorrhagic Uterine Disease.

In excessive thyroid functioning the coagulability of the blood is much reduced, while in insufficient functioning the coagulation time is much shortened. These effects throw light on certain cases of hemorrhagic uterine disturbances, suggesting that they are abortive forms of myxedema. Among 20 pure cases of hemorrhagic uterine disturbance the author found in 13 of the patients pronounced signs of thyroid hypofunctioning, and in all but one the coagulation time was from four to eight minutes in contrast to the nine or ten minutes with normal blood. The viscosity was frequently below normal—in a number only half of the normal figure. The author supports the view that thyroid insufficiency is a prominent factor in tetany in pregnancy, and possibly also in eclampsia. It is possible that all these conditions are different

stages of the same disturbance in thyroid functioning. In any event the conditions of the thyroid should be ascertained in all cases of eclampsia, and this is easily done by examination of the blood, abnormally rapid coagulation testifying to a lack of the normal thyroid secretion. One of his cases was peculiarly instructive: A young woman with hemorrhagic uterine disturbance had borne twins three years before and had had severe eclampsia at that time; at recent examination the coagulation time was reduced to five minutes, and with a relative neutrophile leucopenia of 45 per cent there was a lymphocytosis of 48 per cent (in contrast to the normal 20 to 25 per cent). It is possible also, he remarks, that the thyroid may be involved in the tendency to habitual abortion. Cases have been reported in which women with goiter who had been married for several years without conceiving bore children after thyroid treatment. Cretin mothers are liable to habitual abortion for a time, but finally bears living children. The habitual abortions of women with infantile uterus suggest that the thyroid may here likewise be in an infantile condition. It seems to be established beyond question that syphilis is not responsible for all cases of habitual abortion.—*Monthly Cyclopedia and Medical Bulletin.*

Editorial

PUBLISHER'S NOTICE—The Journal is published in monthly numbers of 48 pages at $1.00 a year, to be always paid in advance.

All bills for advertisements to be paid quarterly, after the first insertion of the quarter.

Business communications, remittances by mail, either by money order, draft, or registered letter, should be addressed to the Business manager, C. S. Briggs, M. D. corner Summer and Union Streets, Nashville, Tenn.

All communications for the Journal, books for review, exchanges, etc., should be addressed to the Editor.

VIVISECTION.

In a letter from the Chairman of the Bureau for the Protection of Medical Research of the American Medical Association, our attention is called to the fact that the anti-vivisectionists take advantage of the fact that many articles are published by members of the profession doing original research work without making note of the fact that their operative work was conducted under anesthesia. We wish to call the attention of our readers to this in order that should they send articles to the journal which deal with subjects of an experimental nature, they will explicitly state under what conditions these experiments were conducted. If on animals, let it be stated whether the experiments were conducted under anesthesia; if anything of an experimental nature is done to children, let it be stated whether the parents or guardians consented. The anti-vivisectionists are so enthusiastic in their endeavors to stop all experimental work that they take every legitimate advantage to make all experimental work seem cruel and heartless. They ignorantly and knowingly falsify and stop at nothing in order to gain their goal—the abolition of all experimental work. They quote doctors who have been dead and buried for years, and by well chosen omissions chance opinions of well known men are distorted in such a way that the original meaning is entirely changed. They publish statistics to show that serums against diphtheria, tetanus, cerebro-spinal meningitis and other

diseases are not only not beneficial, but absolutely dangerous. They have the effrontery to do this when all hospital records show a marked decrease in diseases treated by serums, especially diphtheria and cerebro-spinal meningitis. They never mention the fact that practically all experiments are conducted under anesthesia. In fact, one of their number published an article in one of the lay magazines in which she stated that surgical anesthesia in the lower animals, especially the dog, meant death. Such a statement shows an absolute ignorance of actual facts, and yet this writer had an article in a popular magazine. Before publishing any such statement the editor should have investigated the matter. To mention the benefits arising from intelligent experiments would reflect on the intelligence of our readers. To withhold from anti-vivisectionists the use of all curative measures that have resulted from animal experimentation would be impossible and undesirable, and yet we feel sure that even a threat of such a step when they realized from what a number of blessings they would be cut off would place many of the anti-vivisectionists among those who are intelligent enough to value one human life above all the dogs in the universe. W. T. B.

PRELIMINARY PROGRAM OF AMERICAN PROCTOLOGIC SOCIETY.

Sixteenth Annual Meeting at Atlantic City, N. J., June 22 and 23, 1914.

PAPERS.

1. A Review of Proctologic Literature for 1913—Samuel T. Earle, Baltimore, Md.
2. Abnormalities of the Colon, as Seen With the Roentgen Ray: Lantern Slide Demostration—Walter Irwin Le Fever, Cleveland, Ohio.
3. Coccygodynia: A New Method of Treatment by Injections of Alcohol—Frank C. Yeomans, New York City, N. Y.
4. The Technique of the Perineal Operation for Cancer of the Rectum—James A. MacMillan, Detroit, Mich.

5. Myasthenia Gastro-Intestinalis—V. Lee Fitzgerald, Providence, R. I.
6. Further Observations on the Treatment of Pruritus Ani by Autogenous Vaccines—Dwight H. Murray, Syracuse, N. Y.
7. A Report of Cases of Pruritus Ani Treated with Carnotite —Saml. T. Earle, Baltimore, Md.
8. Treatment of Amœbic Dysentery with Emetin Hydrochloride—Alfred J. Zobel, San Francisco, Cal.
9. Amoebic Dysentery and Its Treatment—William M. Beach, Pittsburg, Pa.
10. Some Consideration of Colonic Surgery—Louis J. Hirschman, Detroit, Mich.
11. Myxorrhea Coli, Membranacea and Colica—Saml. G. Gant, New York City, N. Y.
12. Hemorrhagic Colitis; with Report of Three Cases—Jerome M. Lynch, New York City, N. Y.
13. Retro-Rectal Gumma; Report of Two Cases—Alois B. Graham, Indianapolis, Ind.
14. Anal and Rectal Growths of Benign or Doubtful Character —T. Crittenden Hill, Boston, Mass.
15. Retro-Rectal Infections—Collier F. Martin, Philadelphia, Pa.
16. Radium, Its Use in Proctology—J. Rawson Pennington, Chicago.
17. Rectal Adenomata—Granville S. Hanes, Louisville, Ky.
18. Hyperplastic Tuberculosis of the Colon—J. M. Frankenburger, Kansas City, Mo.
19. Pseudo Intestinal Stasis and Real Intesinal Stasis Demonstrated Roentgenologically—Arthur F. Holding, New York City, N. Y.
20. Local Treatment of Anal Fissure—Jas. A. Duncan, Toledo, Ohio.
21. Reflex Symptoms Arising in the Rectum and Anus—George B. Evans, Dayton, Ohio.
22. Some Unusual Results of Sigmoidoscopy—Ralph W. Jackson, Fall River, Mass.

23. Crude and Careless Diagnostic Methods: Results of, in Reported Cases of Recto-Colonic Condition—John L. Jelks, Memphis, Tenn.

UNITED STATES CIVIL-SERVICE EXAMINATION.

Technical Assistant in Pharmacology (Male). June 1, 1914.

The United States Civil Service Commission announces an open competitive examination for technical assistant in pharmacology, for men only. From the register of eligibles resulting from this examination certification will be made to fill vacancies in this position in the Division of Pharmacology, Hygienic Laboratory, Public-Health Service, at salaries ranging from $1,800 to $2,000 a year, and vacancies as they may occur in positions requiring similar qualifications, unless it is found to be in the interest of the service to fill any vacancy by reinstatement, transfer, or promotion.

The duties of this position will consist of research work in pharmacology, including original investigations in the physiological assay of drugs and of the action of drugs by means of the electro-cardiograph.

Applicants should have a reading knowledge of French and German.

Competitors will not be assembled for examination, but will be rated on the following subjects, which will have the relative weights indicated:

Subjects.	Weights.
1. General educational and scientific training	40
2. Experience and fitness	40
3. Publications	20
Total	100

An educational training, including a degree of Doctor of Medicine from an institution of recognized standing, and at least two years' subsequent experience in experimental pharmacology or

physiology, such experience to have included the study, by means of experimental methods, of the action of drugs, are prerequisites for consideration for this position.

Statements as to training, experience and fitness, are accepted subject to verification.

Applicants must have reached their twenty-fifth, but not their fortieth, birthday on the date of the examination.

This examination is open to all men who are citizens of the United States and who meet the requirements.

Persons who meet the requirements and desire this examination should at once apply for Form 304 and special from to the Unietd States Civil Service Commission, Washington, D. C.; the Secretary of the United States Civil Service Board, Postoffice, Boston, Mass.; Philadelphia, Pa.; Atlanta, Ga.; Cincinnati, Ohio; Chicago, Ill.; St. Paul, Minn.; Seattle, Wash.; San Francisco, Cal.; Custom House, New York, N. Y.; New Orleans, La.; Honolulu, Hawaii; Old Custom House, St. Louis, Mo.; or to the Chairman of the Porto Rican Civil Service Commission, San Juan, P. R. No application will be accepted unless properly executed, excluding the medical certificate, and filed with the Commission at Washington, with the material required, prior to the hour of closing business on June 1, 1914. In applying for this examination the exact title as given at the head of this announcemen should be used.

Reviews and Book Notices

"A Mind Remedy."—By John G. Ryerson, M.D., Boonton, N. J.

This is a singular little book that might excite the curiosity of many readers on account of the unusual trend of the therapeutic applications. The author contends that many diseases that presents no pathology and that have no microscopic origin, and usually looked upon as incurable yield to the administration of lactose or sugar of milk. The author is in the right way, then, when he entitles his book a Mind Remedy. If nothing else can be claimed for the remedy one thing can be said that it is harmless.

"A System of Surgery."—Edited by C. C. Choyce, B.Sc., M.D., F. R. C.S.; and J. Martin Beattie, M.A., M.D., C.M. Three large, octavo volumes, profusely illustrated with hundreds of half-tones and line drawings, and many colored plates. Bound in Interlaken Book Cloth. $7.00 per volume; $21.00 per set. Funk & Wagnalls Co., 354-360 Fourth Avenue, New York.

We acknowledge with thanks to the publishers the receipt of Vol. III of this excellent system of surgery. This volume completes the set. We have already received the preceding volumes of this work and have in our book reviews written enthusiastically of the unusually high merits of the set. Vol. III presents the following table of contents: The Cardia-Vascular System, The Lymphatic System—The Neck—The Nose and Accessory Simuses—The Ear—Pharynx—Naso-Pharynx and Larynx—Direct Examination of the Lower Air Passages and Œsophagus—The Lungs and Pleura—The Nerves—The Scalp—Skull and Brain—The Spine and Spinal Cord—The Jaw—The Skin and Subcutaneous Tissues, Muscles, Fascia and Tendons—Bursea, Diseases of Bones, Fractures and Separated Epiphysis—The Joints—Orthopœdic Surgery. Index to Vol. III—General Index to the Work.

The work is profusely illustrated with beautiful plates and with cuts illustrating the text. Our examination of this well edited

composite work with contributors recognized over the world as authoritative exponents of the department of surgery upon which they write moves us to say that this is one of the very best recent contributions to text-book surgery. Every subject is presented in the clearest, most practical way, and as a guide for the general practitioner in up-to-date surgery it stands without a rival. Dr. John B. Murphy, of Chicago, says of this work. "To have so many surgeons of recognized authority contribute to any system can not fail to make the most of value, both to the student and to the general practitioner. The publishers of this system have placed the profession under lasting obligation for having presented a system of such great value before the surgical world."

Literary Note.

Be we financier, industrial worker, navy, scavenger, or merely a gentleman, we all suffer to a greater or less degree from the ills which our vocations or avocations engender. Just how to prevent, ameliorate or cure these but partly understood ills, should no longer be a puzzle to the man, employer or physician, because a reliable and essentially practical book is soon to appear, under the joint editorship of Dr. George M. Kober, of Washington, D. C., and Dr. Wm. C. Hanson, of Boston, Mass. Among the contributions are such authorities as Sir Thomas Oliver; Legge (London); Teleky (Vienna); Devoto (Milan); Edsall (Harvard); Alice Hamilton (Chicago); etc.

P. Blakiston's Son & Co., Philadelphia, will publish this volume.

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CHARLES S. BRIGGS, A. M., M. D., Editor

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Original Communications

SOME EFFECTS FROM SPIRIT AND DRUG TAKING ON THE UPPER AIR PASSAGES.

By T. D. CROTHERS, M.D., Hartford, Conn.

My purpose in this paper is to give a clinical outline of facts relating to some of the causes of inflammatory states of the throat and nose, as it appears to the general practitioner and nerve specialist.

There can be no doubt that all practical specialists in this field of the throat and nose are familiar with these general causes, but they have not so far attached the importance to them which they deserve, simply because they are not familiar with the modern research work concerning the effects of alcohol and drug taking. The general profession and specialist in other departments of medicine owing to the multiplicity of new topics and tremendous advances in all departments of medicine have paid little attention to the work done in the laboratory and along lines of research concerning the physiological and pathological action of alcohol on the body. Revolutionary statements of facts and conclusions when appearing in medical journals are usually regarded as indications that the authors are partisans and unreliable, and when these facts filter through the secular press they are treated with more or less contempt as visionary and unreal. There is a

childish fear among medical men about endorsing any new statements concerning the bad effects of alcohol,—of being called cranks. New theories concerning tuberculosis or cancer, or new drugs, or any other novel questions increase the interest and attracts renewed attention, but when anything new is said concerning the injury from alcohol there is suspicion of exaggeration. The general profession does not realize that researches concerning the physiological and pathological effects of this particular drug indicate the most revolutionary theories and conclusions, and in the near future the wonder will be why these facts were not recognized before. Clinically the effects of spirits and drugs on the upper air passages appear to depend on several distinct causes either acting alone or in conjunction in the early stages. Later in the progress they are all combined. First, the direct irritant action upon the bronchi, pharynx and nasal membranes with thickening, congestion or anemia. 2nd, the reflex, irritant action from gastritis and other disturbances and irritations to other parts. Third, in organic changes and paralysis of nerve tracts, cirrhotic states of the liver and kidneys and mucous membranes generally, In my experience of nearly thirty years in the constant study and care of spirit and drug neurotics, it is an exception to the rule to find persons who have used spirits and drugs that do not suffer from catarrh and subacute inflammations of the throat and nose. It is always an interesting question whether these inflammatory changes preceded the spirit and drug taking as exciting and predisposing causes, or have followed as a natural result. Many persons have a history of nasal and throat congestion due to direct irritation, followed by exhaustion and debility for which spirits and narcotics have been found most agreeable remedies. Common examples of persons breathing air containing irritants and exposed to great changes of temperature, who have found cocaine, morphine and other narcotics to give great relief.

This is quickly followed by an addiction and a distinct drug neurosis in the future. Other persons have bronchitis and inflammatory states of the throat which are treated by spirits covered up with syrups, and the narcotic effect is so pleasant that the drugs are continued. All specialists and general physicians understand

that there are degrees of susceptibility to take on inflammatory states of the membranes of the throat and nose from very slight and apparently insignificant causes. There is present a feeble resisting power in the mucous membrane to any changes and irritations which is frequently inherited and depends very largely on the defective nerve centers controlling these parts, as well as want of training, bad surroundings, bad diet, etc. The direct irritant effect from alcohol on the membrane is well illustrated by comparsion with its effects on the surface of the hand or body. Placing a drop of alcohol on the surface, a sensation of chill and irritation which follows will be increased by more alcohol until inflammation and destruction of the skin follows. This is an example of its action on the mucous membrane of any tissue it comes in contact with. This is due specifically to its rapid water absorbing properties, abstracting the moisture from the tissues with such rapidity as to give a sense of chill, irritation and finally end in inflammation. These effects are noted in alcohol as a beverage in any form and its passage over the mucous membrane with a sense of irritation and burning, ,due to its water abstracting property. Water is used before and after spirits are taken to overcome the sensation, the more pronounced the irritation, the greater the amount of alcohol. It will be readily understood that the frequent and continuous use of spirits producing a constant irritant action of a greater or less degree, is a direct cause of inflammatory states of the membrane. Clinical observation confirms this, not only by examinations of the throats of drinkers, but of the changed tone of voice indicating thickening and changes of the vocal cords. In chronic cases, both the bronchial and nasal tones are so pronounced and the carrying properties of the voice is so markedly lowered and its volume is diminished and replaced by harsh, jerking, indistinct echoes, and even beer drinkers who sing bass lose their power of control and the tone becomes broken and harsh.

Leading singers quickly discover that alcohol and tobacco seriously impair and finally destroy their vocal powers. We shall show that these effects are due to both local and constitutional changes in the blood vessels and nerve fillaments, and absorbents.

It will be new to many persons that the congestion of the face so common in spirit takers is an exact duplication of what occurs in the membranes of the brain and mucous surface of the throat and nose. One with an intensely red or pallid face, showing hyperemia or anemia, has deranged capillary circulation of all the membranes, particularly those rich in blood vessels. The vasomotor paralysis of the facial nerves, diminishing the contractile power of the arteries on the face, is the same in the throat and nose. A recent German writer declared that: "this palsy is followed by varicose states of both veins and arteries in the membranes of the throat and nose accompanied with fibrinous deposits and exudations." The supposed stimulant action of alcohol is found to be an irritant and a paralyzant, and also a narcotic. It is a chemical irritant absorbing the water from cell and tissue. The flushed face of the spirit drinker is simply palsy and narcotism of the vaso-moter centers, regulating the circulation and the contraction and dilatation of the walls of the blood vessels. The heart from the use of spirits is greatly increased in activity, more blood is sent to the surface, but with it comes the diminished contractile power of the nerves to force the blood back again, hence the forcing of the blood to the surface distends the blood vessels and deranges the circulation more and more with each repetition until permanent degeneration follow. The whole capillary system of the membranes of the brain and upper air passages and the face is disturbed, deranged and diseased. Drugs which produce anemia or blanching and diminution of the flow of blood in the vascular structures are followed by the same results. The nutrition suffers from this profound derangement and the metabolic processes are interfered with. The toxins and waste products are retained and form new centers of irritation.

Elimination is checked and suppressed. The mucous membrane of the throat and nose are very vascular and abundantly supplied with arteries, veins and nerves, and hence suffers more directly from this cause. This is evidenced by the increased secretion of water and mucus. After a time the flushed face from the use of spirits becomes permanent and the walls are hypertrophied and the nerves atrophied. The mucous membranes suffer in the same

way. In constant spirit drinkers the burning sensation of the throat becomes less and less, and strong spirits produce only slight sensations. Hypertrophy of the membranes and mucous exudations with subacute inflammatory states follow, then follow bronchial coughs and distressing irritations of the nose and throat, resisting all ordinary treatment. In many instances these conditions are regarded as premonitory symptoms of tuberculosis and are treated with spirits, morphia, cocaine and other narcotics. Dr. McKenzie of London remarked long ago, "that it was comparatively easy to cure bronchial and nasal inflammatory states in persons who abandon all use of alcohol or narcotics, but unless this was done the disease would continue almost indefinitely." The changes in the voice are very significant symptoms of both the inflammatory conditions of the nose and throat, and their influence on the vocal cords. Good judges assert that it is possible from a study of the voice to determine the health or disease of the membranes, and also that there are certain peculiar sounds which distinguish the spirit drinker from the opium or cocaine taker. In a general way the spirit drinker has a rasping explosive echo, while the drug taker has a tremulous, soft, muffled tone of voice. It is very evident in a singer where tobacco and spirits sharpen and ruffle the timber and volume of the tone. A tenor singer invariably exhibits this use of spirits or tobacco by his inability to sustain high or continuous notes, and by his constant tendency to sharp the notes. Some very interesting studies have been made with a phonograph to show the change of the voice and improvement following total abstinence in persons who have chronic inflammatory conditions of the throat and nose. The patient talks into the phonograph at different times, pronouncing sentences, or singing bars, the notes, volume and timber of the voice is thus accurately recorded. Defects of the senses, particular of the taste, smell and hearing following these inflammatory states of the membranes, is a most fascinating field of study, because the changes and variations can now be noted with a degree of exactness, also perversions of sight and mental changes, due to these inflammations are of intense interest. Many of these conditions are physiological variations, not only local, but con-

stitutional. There are now certain conditions and effects which may be considered positive from the amount of evidence on which they are based, thus the constitutional action of alcohol, not only as a vaso-motor paralyzer, but as a disturber of nutrition, is continuous. The results of capillary congestion and anemia is diminished osmosis between the veins and arterial capilaries, also associated with defective oxygen carrying properties of the blood and accumulation of carbon and fibrinous deposits. The blood corpuscles are shrunken and deranged and do not take up oxygen from the lungs freely. This is readily seen in examination of the blood of persons who are using spirits. In the blood currents the red corpuscles are diminished in exact proportion as the system becomes saturated with spirits. The phagocytes are shriveled and diminished, the hyperemias and anemias can be traced, not only in the blood counts, but in the blood cells. Another fact equally well established is that vascular congestion and defective circulation due to alcohol is always followed by accumulated toxins which form deposits and foci for the development of inflammatory states and with this there is diminished power of resistance and ability to neutralize and throw off the germs lodged on the surface. Another fact that alcohol coming in contact and carried by the blood vessels to the capillaries, has a special corroding action on the cells and dentrities, not only its chemical water-absorbing properties, but by its union with the granular matter of the cell. Another fact which has not been noted is this, that when the system is saturated with spirits to a degree it is exhaled from the lungs as vapors and spirits, the mucous membranes of both throat and nose suffer directly from its irritant action. This point of saturation is not confined to local congestions of any one part of the body, but extends to all the organs, particularly of the liver and kidneys. Its action is both corrosive and erosive of the dentrites, cells and tissues and is to all intents and purposes a veritable neuritis. Recently we have recognized that the so-called rheumatism and pains, both local and general in the extremities, in persons who use spirits are due to inflammations of the nerve extremeties and are literally neuritis, also that many of the conditions termed lagrippe, malaria, biliousness and

other derangements, associated with chills, fevers, and exhaustions, are purely toxæmic. The poisons from alcohol and other irritants have concentrated on the nerves of the extremity as well as in the degeneration of the mucous membrane, checking elimination and practically encouraging states of disease and inflammation. The influences so prominent at this time of the year are very pronounced and intractable in the spirit and drug taker. Sir. Wm. Barlow declared "that alcohol was the largest factor in the production of lagrippe and chronic catarrhs of the throat and nose, by deranging the capillary circulation and destroying the nutrition and vitality of the nerve cells." The periodic drinker who uses spirits to excess, then abstains, recovers in some degree from the damage and immediate effects of spirits, but the continuous user of wine or beer or other spirits, in so called moderate doses, has always pronounced throat and nose affections. It may be of a minor character, and not attract much attention at first, and is treated by home or proprietory remedies, but later, when the inflammatory conditions become chronic, degenerations and growths follow, and also ulcers and distinct local inflammatory conditions. Where the spirits are removed the improvement is so marked as to prove beyond question the intimate relation as cause and effect between the spirits and these disorders.

Probably one of the most dangerous and seductive drugs on the mucous membrane is cocaine, which has come into very common use, both medically and surgically, for its analgesic action. Its value depends on its sudden and pronounced paralysis of the nerve fibers and capillary blood vessels, producing pronounced blanching and anemia. The sensory fibers are suspended first and the walls of the blood vessels are paralyzed, the blood is driven out, then the motor nerves are checked and solved up. When this action passes off there is an intense vascularization and secretion of water and mucus and a degree of irritation that calls for a repetition of the drug. It is asserted that this action is due to the chemical combination of the drug with the plasma and cell contents, suspending their action at once, and this is reflected to the brain and spinal cord, later as an irritant and still later, where the amount is large and the use continuous, the effects are noted by

peculiar hallucinations subject to this paralyzing action becomes cirrhotic and the walls of the blood vessels retract and bcome varicose, nutrition is lessened and degeneration of a corrosive nature follows. The blanching of the face is palsy, both of the constrictors and dilators. All sensation is cut off and this condition on the membranes of the nose is followed by a deceptive sense of comfort following its use. The drug is literally a narcotic suspending nerve activity and nutritional force. After a time this derangement extends to the higher cerebral functions and becomes a neurosis of the most dangerous and seductive character.

Constant erosion follows which is concealed and covered up. Cocaine prescriptions for diseased conditions of the throat and nose have proved very useful and valuable remedies, but they must be given with care and discretion. The paralysis resulting from the constant use of this drug in the nasal passages extends down to the throat and larynx. And the changed tone of the voice registers this inflammatory condition, the hearing is also effected, profound anemia of the nasal passages is often a symptom of the use of this drug. It should be remembered that many persons take this drug secretly, but after a time the mental and other symptoms betray them.

Tobacco is another irritant and narcotic to the upper air passages. Like cocaine, its effects are direct, and in chronic conditions where the system is thoroughly infected, it is an active cause of disease of these membranes. One of the worst forms in which it can be used is the cigarette, and this is due specially to the combustion taking place in close proximity to the mouth, where all the gases and products come in immediate contact with the mucous membrane. In a pipe and cigar many of these poison products are condensed and deposited in the stem of the pipe and body of the cigar, and only a small part are carried into the mouth. In the cigarette, where the smoke is inhaled and driven through the nose, its action is direct and cumulative. The nicotine and other products are corrosive and irritating, not only to the terminal nerves, but the capillaries and these poisons are absorbed and carried to all parts of the body. The injury not only disturbs the

surface circulation and the osmotic and metabolic changes, but it destroys nutrition and produces states of local starvation. The cigarette smoker has both anemia and hyperemia of the mucous membrane of the throat and nose. He complains of catarrh and defective smell and change of voice, and his nerves become hypersensitive. The inhalation of small quantities of smoke and other products are more thoroughly absorbed than if the quantity was larger and the smoking more rapid. There are various degrees of resistance to the poison of tobacco, but its continuous absorption is marked, not only on capillary disturbances, but on the nerves and brain sooner or later. Morphine and other forms of opium have no specific direct effect on the upper air passages except that of a narcotic, and these effects are followed by anemia and general pallor of the face and eyes. The senses are diminished and low forms of subacute inflammatory states of the membranes follow. They are thickened and fibrinous deposits follow. The control of the voice is weakened and general conditions of exhaustion appear.

Other drugs have a similar effect, only more pronounced, on the constitution. Inhalation of gases often produce intense congestion by its irritative action not only on blanching, but paralyzing the circulation. This irritation is followed by inflammaton. In all this there is derangement, perversion and injury acuteness of this condition depends very largely on constitutional conditions and degrees of vitality to overcome the local effects of irritants. In my particular work, very marked changes are noted in the disappearance and practical relief from long standing catarrhs and chronic inflammation of the throat and nose by abstinence from spirits. I have noted a number of cases of bronchial troubles, supposed to be tuberculosis, occurring in moderate drinkers. Removal of spirits, nerve rest and constitutional remedies are often followed by complete recovery. A number of persons in these times of stress and strain who are spirit and drug takers, using it secretly and who suffer from throat and nasal troubles, are the subject of much anxiety to both physicians and friends. When their real trouble is discovered and their drugs removed, the obscurity of the case clears up. One is greatly

impressed with this fact by the number of persons supposed to be temperate who have decided disorders of the voice and who frequent the specialist for conditions that are ill defined. Efforts to give relief by catarrhal remedies are unsuccessful and a great variety of cases are considered as active, together with degrees of debility and general feebleness. Such persons go to sanitoriums and recover, in reality they have become abstainers and the degenerative effects of alcohol has been removed. There can be no doubt that rhinitis and bronchitis may precede tuberculosis and active efforts to check these inflammatory states and prevent their socalled passage downward of great uncertainty, unless the general constitutional condition of the persons known. The general fact is becoming more and more prominent that the effects of alcohol and drugs, either openly or secretly, in small or large doses, falls most heavily on the capillary circulation, and this derangement predisposes to the growth and development of bacteria, and with this a diminution of the resisting forces of the body which form a chain of causes that should never be overlooked or misunderstood. I conclude with the Statement made—overlooked or misunderstood.

I conclude with the statement made some years ago by the late Dr. Gross of Philadelphia: "The upper air passages reflect the damage of alcohol and tobacco, and suffer most severely and should always be considered in a study of inflammations of these parts.

Selected Articles

CAN CONSUMPTION BE CURED?

By Herbert C. Clapp, M.D., Boston.

Yes, most decidedly, *yes;* but this answer needs to be explained to prevent misunderstanding. On the one hand, we need to avoid too much pessimism which paralyzes effort, and on the other too much optimism, which leads to carelessness and neglect, which are very often fatal. In looking at the doughnut, we must not forget to see in it the hole. Naturally enough, as a result of the reported successes of recent years, the pendulum has now swung too far the other way, and many people have become too enthusiastic, and now seem to believe that the cure of tuberculosis is as easy as rolling off a log.

On the contrary, it can not be stated too emphatically that, while in many cases, largely proportionate to the earliness of the stage in which it has been discovered and the proper measures applied, it can be cured; yet to reach this result is not by any means an easy task (with comparatively few exceptions), and generally requires a vigorous fight for many months and often for years, before victory can be won, in which contest certain moral qualities and strength of character play a very important part.

It is extremely desirable, therefore, that the public should entertain a correct view on this subject, in order to encourage sane and rational methods of living and treatment for the benefit of individual cases, as well as to be able to institute proper public measures for the control of the disease, and for the prevention of its spread in the community.

The comparative successes in the treatment of tuberculosis during the last thirty years or more have to such an extent stimulated the enthusiasm and optimism of some members of the medical profession that they have publicly and privately declared their

belief in the possibility of the total extermination of the disease in the not distant future; and some of them have even attempted to set the date approximately, basing their judgment on the progress already made. I confess that I have never been able to sympathize with them in these views, any more than with those who predict that the end of the world is near at hand. Indeed, I doubt if we ever shall rid ourselves entirely of this dread disease, at least as long as human nature remains as it is now, on which subject much might be said. Even smallpox, although wonderfully diminished, has not yet become extinct as predicted as a result of vaccination. Nevertheless, vaccination, if properly performed, and universally adopted, ought to be practically specific against it. But just here comes in the human element, and the mental obliquity which prevents some people from recognizing its efficacy, in spite of demonstrable proof. The difficulties in the way of the complete extermination of tuberculosis for several reasons are ten times as great as those of smallpox. The social evil and its immediate results in disease are apparently no nearer extinction than many years ago, and many moralists confess themselves almost discouraged. The reason is that here the human element and the frailties of human nature play a more prominent part than in the case of tuberculosis, and a thousand times more prominent part than in the case of smallpox.

The estimation of some enthusiasts that tuberculosis would become extinct in twenty or twenty-five years, based on figures already obtained as to its diminution, reminds me of the calculation of the faithful young wife of the impecunious artist, who, after many months of fruitless toil had at last sold a picture which took him half a day to paint, for $25. "Splendid," rejoiced the optimistic wife, "$50 a day for 300 working days in the year means $15,000 yearly income. We surely can live on that."

When we consider that among the predisposing causes of consumption are poverty, dissipation, overwork and worry, to say nothing of the rest, is it strange that we should despair of the early and complete eradication of the disease, no matter how enthusiastic we may become as to our wonderful success in treating people who are not too heavily handicapped?

Can consumption be cured? Fifty years ago this question would have been answered in the negative throughout the entire world. People generally considered it a hopeless disease, and the medical profession looked at it with a folding of the hands and a grim contemplation of approaching death, which paralyzed their best efforts. If occasionally a patient got well, it was by the grace of God, and not often as a result of human endeavor. Since then there has been a great change in the outcome of the disease, for the most part owing to modern hygienic, so-called sanatorium methods, which took their real start not far from that time in Goerbersdorf and Falkenstein, in Germany, and which in this country were first heard of to any great extent in the sanatorium in the Adirondacks founded by the illustrious Trudeau thirty years ago. The younger physicians in this country, who have seen many cases get well, can not possibly have any adequate conception of the comparative feelings of the older ones in this regard, especially of those who have largely treated this disease, how they have risen from the depths of despondency to the joys and enthusiasm of success, even if perfection has not yet been attained.

A large amount of money has been spent in recent years in the antituberculosis campaign, and much time and thought given to it, as well as hard work, and that it has been worth while is attested by the chart published in the recent report (the tenth) of the Boston Association for the Relief and Control of Tuberculosis, which shows that the death rate from the disease *since* the announcement in 1882 of the discovery by Koch of the tubercle bacillus(that is, for the last 32 years), has decreased from 420 to 150 for every 100,000 of Boston's population, while during the 32 years *preceding* this discovery, that is from 1850 to 1882, the decrease was only from 475 to 425.

The great statistician, Frederich L. Hoffman of the Prudential Insurance Co. of Newark, N. J., in an elaborate and lengthy paper read before the National Association for the Study and Prevention of Tuberculosis on May 9, 1913, among other statistics, to illustrate the tendency of the tuberculosis death rate in the United States during a long period of time, brought together the

combined mortality of the cities of New York, Philadelphia, and Boston for the 100 years commencing with 1812. From this it appears that there was no decided tendency toward a persistent reduction until 1882. Since that year, however, the tuberculosis death rate has persistently diminished from almost 390 per 100,000 of population in 1881 to 180 in 1912. This shows, he thinks, the most conclusive evidence on record that the deliberate, thoroughly intelligent and nation-wide campaign against tuberculosis on the principle of its being an infectious disease and transmissible from man to man, has been successful beyond expectations. Mr. Hoffman's statistics for a group of 50 large American cities show that there has been in this larger group also a persistent and very considerable decline in the tuberculosis death rate since 1882, that is, from 335 per 100,000 of population in 1881 to 166 in 1911. In England the death rate from tuberculosis has dropped nearly 50 per cent in 40 years. In London the drop was 33 per cent between 1901 and 1910. There has likewise been a great drop throughout the civilized world. Much testimony along similar lines could be presented. The greater part of this decline has been owing strictly to antituberculosis work since the modern campaign began. The comparatively small decline in the rate before 1882 was probably mostly due to the general improvement in public sanitation and hygiene. And yet this general improvement goes so much hand in hand with strictly antituberculosis work and is really such an integral part of it, that it is well-nigh impossible to dissociate them. Better construction of houses with reference to light and air, better drainage, better regulation of the hours of labor, better ventilation of factories, better food, less drunkenness and other improvements in the social condition of the people, would naturally tend to lower the tuberculosis death rate, even if this were not the principal object in mind.

One of the best arguments to be brought forward in favor of the curability of consumption, an argument indeed, which is absolutely incontrovertible, is that derived from post-mortem examinations of persons who have had the disease and have recovered from it, and have subsequently died of some entirely different disorder ,and yet in whose bodies have been found by skillful

pathologists unmistakable evidences of healed tuberculous lesions. Such post-mortems are made very frequently abroad, especially on hospital patients, far more frequently indeed than in this country. This evidence has been presented so many, many times, that now it is accepted by all educated physicians, and is a conclusive answer to some scoffers who even at this late day occasionally pretend that a patient, especially in the incipient stage, who claims to have been cured of tuberculosis, never could really have had the disease at all.

Indeed these findings are so common that we are forced to believe that some people have had the disease and have recovered from it spontaneously, perhaps often without knowing that they ever had had it.

Another proof of the curability of consumption, and one which particularly and immediately interests us, comes from the reports of the modern sanatoria for its treatment, which are now so numerous throughout the civilized world, and which all tell essentially the same story, though differing in detail. Many are cured also by the same kind of sanatorium methods either at home or elsewhere outside of a sanatorium; but naturally it is very difficult to get statistics from such. Even from the reports of sanatoria it is not easy to get figures which are comparable with each other and which, therefore, can be conglomerated, for the reason that their bases of comparison are so variant. Some aim to take only incipient cases, some mostly advanced, and some all grades. The classifications of cases and results also differ in various ways, although an attempt at uniformity is being made. For instance, at our Rutland Sanatorium, after some years' trial of its own classification, the adoption of that of the National Association, for the sake of uniformity with other institutions, at once resulted in the dropping of the percentage of "apparently cured" cases discharged, because many of the patients were unwilling to remain during the three months now demanded after the cessation of all their active symptoms. Some of these undoubtedly kept up their good record after they had left, and later reached the desired goal; but of course by the terms of the classification they never became eligible to be recorded in the banner roll of the sanatorium.

The commonest classification of the stages of the disease for the past few years has been *Incipient, Moderately Advanced,* and *Advanced* (or *Far Advanced*); and for results *Apparently Cured, Arrested, Improved,* and *Not Improved.*

In discussing a subject like this a great deal depends on the precise meaning we attach to the word "cured" in this connection. When a person recovers from some diseases, he is in practically just as good condition as before he was sick, and has no further occasion to take anxious thought about the matter in relation to those particular affections. But when he has pulmonary tuberculosis, and it is not immediately fatal, several endings are common, depending largely on the amount of his disease and of his special power of resistance to it, the way it is handled, and on other factors. Some healthy people fortunately have so much lack of susceptibility to tuberculosis or a so-called immunity, either natural or acquired, that they are never touched by it in the slightest degree, in spite of exposure to contagion, and in spite of being surrounded by powerful influences favorable to its production. Half the world in this manner has an immunity against scarlet fever. Others come fairly near this high-water mark with only a slight susceptibility to tuberculosis. They are, as it were, struck by bullets which glance off without apparently doing much harm. They often recover spontaneously with a cure which may prove to be permanent, especially if surrounded by favorable influences, whether they are aware of their condition or not. One of the latest theories, which has gained quite a wide acceptance, is that many, if not most, of the common cases of consumption in adult life, really started in early childhood in this way, without attracting much, if any, attention, and then remained latent for years, finally to be aroused into activity under the fostering influence of overwork, bad air, or any other agency which might reduce the patient's vitality. Cases fired up in this way, including mild infections with slight symptoms, those more severe with well-marked evidences, and even some of the more advanced cases with cavities, may ultimately acquire what is practically a condition of perfect health; or they may reach what is often called an economic cure, where they are able to work to a greater

or less extent; or they may drag along for years in a kind of vegetative existence, in various degrees of individualism, where the question of whether it is worth while often intrudes itself. All of this without dying; but only those who reach perfect health should be called "cured."

The question of individual susceptibility and resistance is a very queer one, but yet it explains many things that are otherwise hard to understand. How one person, for instance, who is infected, seems to be completely overwhelmed, in spite of anything that may be done, perhaps from the very beginning; and how another at the other extreme may go free, scarcely knowing that he has been hit; with all grades between. This difference in susceptibility is seen in animals. Some are very easily infected, like monkeys, rabbits, guinea pigs, swine, and cattle; while others show a great resisting power, like dogs, cats, foxes, lions, and tigers. Some races of men, like the indians and negroes, are peculiarly susceptible and fall easy victims to consumption.

All phthisiologists agree that many (perhaps one-quarter or more) of those patients who have been graduated from a sanatorium as "apparently cured," backslide after returning to work, from various causes which will be considered later. This is the reason that they have been called "apparently" cured and not "cured." The adjective added was in the interest of modesty and truth. The backsliding proved either that the cure was apparent and not real, or else that a new and fresh infection had taken place.

It was hoped that this qualifying adjective would so impress the graduates with the precariousness of their condition on leaving, and the danger to them if they neglected to follow out with care the directions for future righteous living, that as little of this backsliding as possible might be expected. But unhappily some probably could not, and some would not, live up to the best light they had. Lately, therefore, many sanatoria have considered it wise to substitute for the phrase "apparently cured" their second-best designation, "arrested." The argument was that if patients on discharge simply considered their disease as arrested, and liable, if they were not careful (especially for two or three

years), to flare up again, the importance of hygienic living would be more emphasized.

Which ever way you put it, the practical lesson remains that after discharge from a tuberculosis sanatorium with permission to work, the patient must consider himself constantly on probation, as it were, for at least two or three years, and to a lesser degree for a much longer time. The same principle holds good, of course, if the patient has been "cured" by sanatorium methods outside of a sanatorium. If the word "cure" is used in this disease, it must be restricted to the definition applicable only to tuberculosis. Speaking roughly, then, as no absolute accuracy can be attained, statistics from a large number of sanatoria show that of the incipient, the most favorable class of cases, perhaps as an average from one-half to three-quarters on discharge are reported as apparently cured or arrested, and supposedly able to go to work. If then, roughly, from one-half to three-quarters of *these* stand the strain and remain well without backsliding after a probation of two or three or four years, we have not more than half of these original incipients booked for the ultimate cure, which of course is the only cure to be really considered, as it hardly counts to get folks well if they can not remain well. If the probationary period were extended, it must be admitted that the percentage of ultimate cures would be somewhat still further reduced.

If we inquire into the results of treatment of the moderately advanced cases, the percentages naturally are a great deal lower, and the advanced or far advanced cases show an exceedingly small proportion of cures, so that if we had only the latter class to deal with, we should feel pretty near being utterly discouraged.

Speaking very roughly then, with not more than one-half of the incipient or best grade of consumption cases ultimately cured; with a very much smaller proportion of the moderately advanced cases ultimately cured, and with very few indeed of the far advanced, the picture is not as bright as it is sometimes painted. Shall we, therefore, get discouraged? By no means. For in contrast to the results of fifty years ago, what success we have now is almost phenomenal, and the only way to achieve greater suc-

cess is to ferret out as patiently as possible present mistakes and to try to eliminate them. We are encouraged in this hope by the fact that in properly selected cases, where there is sufficient intelligence, education, will power, common sense and financial support, our results are already far better than those just given. It behooves us then to inquire into some of the reasons why not more cases are arrested while under sanatorium treatment, and also why, after they have been arrested, so many of them backslide when they again go out into the big world.

In the *first* place, as has been many times said, too often the diagnosis of the disease before the patient begins treatment has not been made early enough. The old comparison of the difficulty of putting out a large conflagration being so much greater than putting out a small, just-beginning fire, although trite, still holds good. Some improvement in this direction has already been made, but much remains to be done. Physicians are partly at fault, but more blame should be attached to patients, partly on account of ignorance of the first symptoms, which ignorance should be corrected by public education; and partly because, when they do know, they often resolutely refuse to accept the situation or to take the necessary steps. Early cases are arrested very much more quickly and surely. Although our Rutland Sanatorium has generally been specially reserved for incipient cases, yet such are apt to be in the minority there, simply because they do not go. Often only one-third of the patients there are incipient.

Secondly, the stay of patients in the sanatorium is, as a rule, far too short. It now averages about six months. This may be long enough for a few, but not for most. The reason for the short time is at least two-fold; partly because the patient too soon thinks he is all right, and is in a hurry to get away, and also because the sanatorium is often glad to have him go, because so many outside patients are insistent to have his vacant place as soon as possible. Accommodations even here in Massachusetts are now so few, that it often takes two months or more after acceptance, before a patient can get in, during which time he is apt to get worse.

After a so-called good case has been under treatment for a comparatively short time, he often looks rosy and plump and apparently well. He says he feels well, perhaps as well as he ever did in his life, and yet he is still a sick man, and would almost surely collapse under the strain of competition in the outside world. This we all recognize as the special danger-period for him, whether in the sanatorium or under private treatment outside. It is often very hard to persuade him to keep on with his treatment. If the patient is outside, the conscientious physician has another difficulty to encounter in apparently seeming anxious (for a consideration, of course), to continue to treat one who looks well and says he feels well, even if he is not well. Another reason for his wanting to leave before he should, and a perfectly natural one, is that stern necessity often seems to compel it. His money is all gone and he needs to go to work, perhaps to support a family. Thus his generous feeling proves his own undoing.

Thirdly, before the patient gives up sanatorium treatment the so-called "rest cure" should be followed by a "work cure," to prepare him for the resumption of his work in the outside world. Too much can not be said in commendation of the wonderful effects of rest in consumption properly applied, and of the judicious regulation and adjustment of rest and exercise. Indeed, those consumptives who egotistically think they "know it all," and who under the mistaken impression that all that is necessary is fresh air and good food, undertake to conduct their own cases, generally with disaster, oftenest fail through lack of knowledge of accurate details about regulating exercise and rest. Healthy people need exercise. Consumptives, especially at first, need rest in generous doses, but the nearer they get to the condition of health, the more exercise they need. Occasionally, to be sure, some become so impressed with the idea of rest as a therapeutic measure, that they want to continue it for the remainder of their lives. They get lazy. These are in the minority, however. But if patients do little or nothing but rest until they leave the sanatorium, and then try to plunge at once into the competition of life, ill results may follow. The idea is now recognized, there-

fore, that an additional period of time should be taken, during which the mind and muscles should be so trained, under careful medical supervision as to fit them for life's work, as well as to cultivate a good general resisting power.

Now, why does the disease relapse after it has become arrested, and the patient has resumed work of one kind or another? For several reasons, the first of which was given by good old Dr. Isaac Watts, in his "Divine and Moral Songs for Children." "Let dogs delight to bark and bite, for God hath made them so"; "Let bears and lions growl and fight, for 'tis their nature to;" and this reason is equally appropriate to the treacherous disease tuberculosis. On this account perhaps a relapse may occasionally be necessary in spite of what anybody can do.

Poverty is another reason. It has been said, "Only the rich can afford to have tuberculosis," and poverty is certainly a great factor in inducing tuberculosis, a hindrance in overcoming it, and especially a big handicap in keeping well after a return to work, although not by any means an insuperable obstacle to permanent recovery. When we think of the homes to which so many have to return, dark, overcrowded, insanitary tenements, with surroundings such as are constantly giving rise to new cases, is it strange that some relapse? Tuberculosis is particularly a house disease and some infected houses, especially in the slums, have claimed victim after victim. Here is an enormous field for private philanthropy, if not for public appropriation, to provide healthy houses, model tenements with roof gardents, and buildings like the Vanderbilt "Home Hospital," 78th St. and John Jay Park, New York. Boards of health should certainly condemn improper buildings, fight the dust and smoke nuisances, supervise lodging houses and compel the sanitation of workshops and factories. Among the pood follow-up work is very important, and the trained visitor to inspect conditions and give advice, and the domestic science caller to teach the proper selection and cooking of food, both systems started by the Boston Association and then turned over to the public authorities, are steps in the right direction.

Improper occupation after discharge is another very effective cause of relapse. And here comes in one rather curious and unexpected fact learned in the school of experience. After an extended trial we find that the majority of patients get along much better if they go back to their former employment, provided they are not distinctly dangerous ones, than if they take up something new, which is theoretically better suited for their condition. From the observation of the remarkable effect of fresh air in the recovery from the disease, the inference was natural that to stay well the same should be continued, and that the work, if formerly sedentary and indoors, should be changed to outdoors. But the practical fact remains that the number of suitable out-door occupations open to graduates is very small, that the extra exposure and unusual strain are apt to be too much for them, that the income for one not especially trained to the new work is also small, and that this smaller income will buy less food and other comforts and necessities of life. These and similar considerations more than overbalance the acknowledged superiority of a longer period in the twenty-four hours in the fresh air. We all find also that the utilization of the worker's off-duty is more important than that of the on-duty time, and that if the work in a well-ventilated office or shop is suited to his capacity and strength, he will generally get along well, if he has a sufficient number of hours of sleep in the open air, and is not prodigal in the expenditure of vital force in his recreation time. If he is skilled in his former work, he can earn more than in something untried. Formerly the commonest advice was to go on a farm and work, or drive a livery team, or to deliver groceries and provisions or something of that kind. Generally the giver of this advice knew as little practically about what was involved in this work as the receiver; but on trial, if the job was obtainable, as occasionally happened, the difficulties sometimes loomed up like a great crowd.

Among different occupations recommended, none has received stronger support than farming, and yet on account of the hard physical work, the long hours of toil and the exposure, few city people could stand the strain as farm hands. The farmer himself needs the work done, has generally too little help, and can not

afford to coddle or favor the worker. If the worker tries to run the farm himself without previous experience, he makes a financial failure of it. Besides, the average city man has no taste for farm work and really dislikes it. Small poultry work is better.

The only real good way to utilize a farm for these people is to have it connected with a sanatorium in the form of a farm colony, and to have graduates or those not far from graduation work on it under medical supervision, each as many hours per day as is good for him, or not at all some days, if his physical condition demands a rest. This will not be a financial success, but will confer a benefit on the workers, and will test their endurance and prepare them for other work. For years at Rutland it has been the policy to employ under medical supervision on diminished pay a certain number of graduates, who had not become tough enough to engage in outside competition, to work about the institution, mostly inside with open windows and for them it worked very well. If members of the Legislative Committee were amazed at this large force of workers on the pay roll, the fact was explained as for the benefit and further treatment (work cure) of the patient, which might prevent relapses.

Another very effective influence in favoring relapses is the spirit of *over-confidence* begotten in some of those who have finished the treatment and have gone to work again, apparently believing that they are "cured" so thoroughly, that nothing could ever happen to them again. This spirit tempts them to do all sorts of things antagonistic to their welfare, recklessly to squander their recently repaired physical assets by overwork, too much play and even by dissipation, relaxing also in the principles taught them of the hygienic life. They consider that they are cured in the sense of a cure of measles or of scarlet fever or of typhoid, with no prospect of a return of their disease, and this opinion they hold in spite of proper explanation. If the word "arrested" will make them more careful than the word "apparently cured," by all means let us use it. The great fact for them to remember is that the sanatorium treatment does not "end all," but merely starts them on the road to health, and that they can not afford to neglect the hygienic life, and should call in extra help if things

do not go just right. For this reason we may call attention to the fact that it has not infrequently happened that persons discharged as unarrested have sometimes been more successful in reaching the ultimate cure than the class now under consideration; because they knew they were not cured, and therefore were prepared to continue the fight indefinitely. So some physicians even go so far as to advise all graduates to say, not "I had tuberculosis, and am now cured," but rather, "I have tuberculosis." Human nature is such that it is doubtful if a man's whole conduct could be completely changed by a slight difference in phraseology. What he needs, after proper instruction, is to have his will power, his moral fiber, his whole character strengthened. With these and other important modifications we look to the future for greater successes than in the past.—*Medical Record.*

Extracts from Home and Foreign Journals.

SURGICAL

Cause and Cure of Cancer.

From the laboratory point of view, Lazarus-Barlow tries to show how radiobiologic research indicates radium and other radiations as a very special agency wherewith to treat cancer; how certain disadvantages are unavoidable and other avoidable with our present knowledge; how, and in what directions, research should be conducted to turn present failure into future success. The ideal he holds is that in radium and other radiations we hold the solution of the cure of cancer. In a sufficient dose radium and other radiations are capable of killing every type of cell met with in cancer.

The action of radiations on cells, he claims, is selective, or conversely; all varieties of cells are not equally vulnerable to radiations. There is some evidence that all active immunity is produced as the result of acting on malignant cells with radium. Lazarus-Barlow insists that microscopic examination by a competent morbid histiologist should be made of every case subjected to radium treatment. The amount of radium in use should be verified periodically by a competent physicist. It should be recognized that the metabolic processes of every patient after exposure to a considerable dose of radium are profoundly modified, at least for a time. Treatment with radium should not follow immediately on operation. If radium treatment of a malignant new growth be decided on, such treatment should not be preceded by complete removal of the main part of the growth.

Finally, Lazarus-Barlow states that, whatever treatment may be the case in the future, for the present radium treatment of malignant disease should be confined to those cases for which modern surgery can not offer a fair prospect by operation. But

this is the furthest that one can go. At present, where modern surgical operation can offer a fair prospect of satisfactory result, the knife must be recommended in preference to every other agent, and this is as true for recurrences as for the primary disease.—*The Journ. of the Amr. Med. Asso.*

Effect of "606" on the Eye.

Seven cases of serious eye complications follow its use. P. S. McAdams, in summing up the effects of "606" on the eye, says that no case of injury to the healthy eye has been proved. The consensus is that it is innocuous to the healthy eye. A favorable result is to be expected from the salvarsan in syphilitic disease of the iris, the choroid, retina, and optic nerve in syphilitic paralysis of the ocular muscles, and sometimes in interstitial keratitis. It is an effective specific remedy in syphilis of the eye especially indicated when speedy aid is urgent. It is not a panacea for ocular syphilis and can not entirely replace other preparations. No benefit is produced in simple, primary optic atrophy.—*The "Red Back" Texas Medical Journal.*

Actions of Chloroform and Ether on the Blood Pressure.

H. P. Failrie thus sums up effects of the two anesthetics on blood pressure: A fall of pressure is produced throughout the administration of chloroform. With the establishment of full anesthesia this fall amounts to at least 10 mm. and sometimes considerably more; along with this the pulse beats slower and a varying degree of pallor is present. Surgical shock during chloroform anesthesia produces a slight further fall of pressure. With the withdrawal of these two depressants—chloroform and shock—the blood pressure exhibits a tendency to rise rapidly and very often soon reaches a point a few mm. below the patient's normal. Little alteration of blood pressure is produced by ether. It may cause a rise, it may maintain a constant level, or it may cause a fall. It causes more rapid and more forcible cardiac action, with dilatation of the smaller vessels, as evidenced by flushing; the blood

pressure level remains almost constant. With intercurrent shock a considerable fall of pressure takes place, a fall almost equal to the combined effects of chloroform and shock. Recovery from shock is slow, some time elapsing before the blood pressure approaches the normal. Frairlie's summary is based in part on observations made on animals, but mainly on his experiences of three years' use of the drugs in man. It is not generally appreciated that ether thus may lead to an increased danger in the face of surgical shock, and he quotes from several prominent authorities to substantiate this belief. Chloroform would thus seem to be the anesthetic of choice for cases with severe shock, but where shock is absent or likely to be slight, ether should be employed owing to its greater margin of safety.—*Exchange.*

Note on a Simple Method for Diminishing Chloroform and Ether Sickness.

The *British Medical Journal* of December 6, 1913, contains an article by Renton on this topic. Having observed that cases of gastroenterostomy treated in the Fowler position had very little postanesthetic sickness, Renton has for the last six years raised the upper end of the patient's bed on blocks twelve inches high in all cases after chloroform or ether anesthesia. This he continues for twenty-four or thirty-six hours.

This plan has been followed by a great diminution in the amount of sickness. By the old method in which patients were kept lying in bed with the head very low, the amount of sickness was very great in many cases. The staff nurses at the Western Infirmary and nurses in private confirm the statement that the improvement since the upper ends of beds were systematically elevated has been very great, and in consequence the suffering to patients and the labor to nurses are very much less.

The reason that this method is satisfactory is purely mechanical, as it is more difficult to be sick in an elevated position than with the head low. Certain patients are, of course, very sensitive, but even when on previous occasions patients report that they suffered for days with sickness, when in the elevated position the sickness very soon passed off.—*The Therapeutic Gazette.*

Perforation of the Appendix by Pin, Without Symptoms.

The second case I have is one of a pin in the appendix. I have, purposely, not opened this appendix so that nobody can say I stuck the pin in. The pin was giving no symptoms whatsoever. The case was one of strangulated umbilical hernia. I ran across the pin in doing the operation. The woman died. It was necessary to resect about seven feet of the bowel altogether, but the appendix pin had been giving no symptoms whatsoever.—*Long Island Medical Journal.*

Intestinal Obstruction from Abscesses Following Appendectomy. Operation (Evacuation Through Bowel).

The third case I have to report this evening is that of a child five years of age, a little girl who was taken with ordinary acute appendicitis. It was the first attack. At operation, performed during the night, a single drop of pus was found at the base of the appendix. I left a drain in. The child did very nicely for the first three days. Then I removed the drain. I think that is the important part of the case. I took the drain out, had to use quite a little force to do it, and I probably opened up a new area of infection. She developed a large abscess on the left side, and obstruction symptoms again, and her condition became so severe that fecal vomiting was almost continuous, lasting about eight hours. After consultation I was prevailed upon not to open the abdomen. I thought I should do so, but yielded to the judgment of others and did not do so. Then the father begged me to do something, and I suggested the use of the sigmoidoscope. I used the sigmoidoscope and was able to see the bowel collapsed and held partly closed, evidently by pressure on the outside. The child was in such condition that I was willing to take the risk, and I took a piece of wire, which I had at home, and sterilized it, and put it over the sigmoidoscope and opened a hole in the bowel. That is, of course, not good surgery, but it worked in this case, and the fecal vomiting stopped, and the child is well today.—*Long Island Medical Journal.*

MEDICAL

Dysentery Treated by Hydrochloride of Emetin.

Juan Carlos Labat, La Semana Medica, August 4, 1913, reports the use of emetin in a case of dysentery which had been lasting 7 months and which had defied all treatment. During the last five months the patient had 20 bowel movements a day—blood and mucus—and was greatly emaciated. Then 0.05 grammes of emetin were injected. The day following, the patient had 9 movements. The next day the same amount of the drug was given and the movements reduced to five. The injections were continued every other day and a complete reëstablishment of health resulted.—*Buffalo Medical Journal.*

Can Psychic Depression Cause Death?

This question has been put to us recently in several ways, as: Can a person die of a nervous breakdown—referring to a case of which we have no personal knowledge, and described as apparently in good health a few days before death and with no organic disease claimed by attending physicians. Did ——— die because he was discouraged—referring to a case in which different attendants made such discrepant diagnoses, along lines with which we have no special experience that no conclusion could be drawn, although a comparatively recent observation of the case, professionally, along other lines, led to some scepticism as to the existence of serious organic disease. Can a person die of a broken heart? etc.

There is no doubt but that sudden and violent psychic strain may cause death, either through inhibition of cardiac and, possibly, other vital functions, or through the production of apoplexies, etc. Neither can it be questioned that the mental state may turn the balance one way, or the other in serious acute illness; nor that it may depress various functions so that the potential life of the individual is shortened and the resistance to various dis-

eases lessened to such a degree that a given organic disease is considerably increased in mortality.

But, without adequate physical cause of death, can it be determined by general nervous depression, such as grief, discouragement, shame, etc.? This is a prevalent popular notion. It is of course, subject to corroboration by the post hoc propter hoc argument. Is it correct or incorrect? It occurs to us that this is a question deserving serious and scientific consideration and we welcome discussion.—*Buffalo Medical Journal.*

Stomach Complications with Gallstones.

Aldor recalls that nearly eight years ago he published his experiences in about a hundred cases of cholelithiasis without jaundice in over half of which he had found signs of a catarrhal affection in the small or large intestine or both. His examination of hundreds of similar cases since has confirmed the frequency of chronic intestinal catarrh with cholelithiasis, suggesting some causal connection between them. He here reports almost similar findings in respect to the stomach. Normal conditions of gastric secretion were found in only 18 per cent. of the 82 patients! hyperacidity in 39 per cent; subnormal or no acidity in 42-6 per cent. The latter condition seems to be the result of the severe affection of the gall-bladder abolishing its function. The loss of gall-bladder functioning possibly modifies the composition of the bile as well as its mode of outflow. Bile in the gall-bladder is nearly ten times more concentrated than bile which drips directly from the liver into the intestine.

For these and other reasons enumerated, it seems evident that the gall-bladder is more than a mere reservoir for the bile, and the loss of it often entails severe and irreparable disturbance in gastric secretion. In a certain proportion of other gall-stone cases, chronic gastritis is responsible for the disturbance in gastric secretion. In this class of cases the symptoms on the part of the stomach keep up more or less most of the time, while in the other group they subside more or less during the intervals between the attacks of gall-stone trouble.

It is very important in treatment to discriminate between the cases with catarrhal affections and those without, as the measures appropriate in one may be directly injurious in the other. When the subacidity results from loss of gall-bladder functioning, hydrochloric acid is indicated, 25 or 30 drops in water half an hour after meals. This does not supply the natural amounts of hydrochloric acid, but it is enough to give the stimulus for pancreas secretion. When it is a question of chronic gastritis, with large amounts of mucus, rinsing out the fasting stomach has often had a surprisingly favorable action. Discovery of impairment of the gastric secretion with nothing else to indicate chronic gastritis, testifies to severe changes in the biliary apparatus, especially in the gall-bladder, and thus betokens a graver prognosis from this point of view than the gastritis cases.—*The Journal of the American Medical Association.*

Direct Sunlight in Treatment of Tuberculous Fistula.

This long article is by an assistant at Rollier's sanatoriums in Switzerland and an assistant at Bier's surgical clinic at Berlin. Sixteen severe cases are reported in detail as typical specimens of what can be accomplished by months of sunlight treatment in old fistulous processes. Rollier reported last year a complete cure in 248 out of 331 cases of open tuberculosis. In the 16 cases reported the 4 in which the soft parts alone were involved have healed entirely, as also 8 of the bone cases, but in 4 there is still a minute active process in the depths so that the fistula still persists, although materially reduced in size. Fistulas in soft parts heal in four or seven months, but when a bone or joint process is the cause of the fistula a year is usually necessary, sometimes less, but oftener still longer. Kirsch and Gratz say that even under a brief course of heliotherapy the fistulas show a marked reaction, including those that have previously resisted all conservative and surgical measures. The sunlight does not cause encapsulation of the fungous masses, but a breaking down of the disease tissue and its substitution by cicatricial tissue.—*The Journal of the American Medical Association.*

The Subcutaneous Administration of Oxygen as a Therapeutic Measure.

Dr. John McCrae of Philadelphia stated that he had used oxygen in this way for the last two or three months and believed it was the rational method of administering it, and properly placed, it was useful. He had had occasion to employ it in a surgical case which had a severe operation. The patient looked as though he might die in a short time. His respiration was 60; he had extreme edema of the lungs, extreme pallor, profuse perspiration, and signs of impending death. With repeated injections of oxygen the man recovered. He had used oxygen in thirty cases and believed it should be a part of the armamentarium of the surgical operating room.—*Medical Record.*

Quinine and Rabies.

The Pasteur treatment of rabies has certain weak points. While effective as a preventive it must be employed before the infective agent has had opportunity to develop, and it requires some days before protection can occur in the inoculated person. If the patient has already developed symptoms of the disease nothing is gained by using Pasteur's method. Inasmuch as rabies is an infectious disease, a living agent of some description must be present. By many observers this is thought to be protozoan in character. With this as a basis, Moon tried out the action of quinine on dogs that were inoculated with rabid brain material and were allowed to develop active symptoms of rabies. Quinine was then administered internally in large doses, equivalent to from twelve to eighteen grammes daily for an average man. The medication was pushed to the limit to secure the full physiological effect, one bordering on the toxic. As a result three untreated animals died, while the three treated ones recovered. Report also comes that this method has been employed successfully in one case of a human being.—*Medical Times.*

Intraspinal Injections of Magnesium Sulphate in the Treatment of Chorea.

This method of treatment which is now generally referred to as Marinesco's method was first suggested by the experimental and clinical work of Meltzer and Auer of New York. These investigators had shown that magnesium sulphate in intravenous, subcutaneous, and intraspinal injections, and in local applications to nerve trunks, inhibits the two chief properties of nerve tissue, namely, its excitability and conductivity. On the basis of their experimental work, Meltzer and Huer had suggested that the subarachnoid injections of magnesium sulphate might be employed with advantage as a substitute for cocaine in producing regional anesthesia. The first important therapeutic application of this method was in the treatment of tetanus. At the present time favorable results from this mode of treatment are being reported from various clinics abroad. Marinesco demonstrated the good effects of magnesium sulphate when injected into the subarachnoid space in sciatica and in the gastric crises and the lightning pains of tabes, and later applied this method in the treatment of Sydenham's chorea. In 1908 he reported four cases of the latter disease successfully treated by means of the intraspinal injections of magnesium sulphate. Since that time similarly favorable results have been reported by Baduel, Rocaz and others.

The most recent contribution to this subject is that presented by Augusto Natali in the *Rivista Ospedaliera,* March 31, 1914. He employed the socalled Marinesco method in the treatment of eight severe cases of chorea, one of which was a chronic case in an adult. The technique consisted in the performance of lumbar puncture in the usual manner, the evacuation of a certain amount of the cerebrospinal fluid, and the injection of a solution of magnesium sulphate. The strength of the latter varied from 7 to 25 per cent, and the amount injected consisted of 1 cubic centimeter for every 25 pounds of body weight. Of the author's eight cases, following the first injection, there was a rapid improvement in two cases, an appreciable improvement in two cases, and a slow improvement in two others. No benefit was derived in the two

remaining cases which included one instance of the chronic type of the disease. The importance of these results is revealed by the fact that all of the cases were severe ones, and had failed to respond to the usual methods of treatment. Natali points out that it is of advantage to follow the intraspinal treatment by means of a brief course of arsenical medication. As regards the rationale of the action of the magnesium sulphate Natali is probably correct in stating that this drug acts not as a specific but merely as a symptomatic remedy, diminishing the excitability of the nerve centers.—*Medical Record.*

OBSTETRICAL

Methods of Treatment of Puerperal Infections Which Have Given Improved Results.

One hundred and twenty-five cases of infection following abortion after the second month of delivery have been treated in a conservative manner as far as the inside of the uterus is concerned, except when firm contraction of the uterus was not present, or when it could not be secured by the use of strychnine or ergot, or when the uterine cavity was firmly packed with iodoform gauze. This was done for the purpose of securing firm contraction if the uterus had not been emptied to facilitate the expulsion of its contents. The satisfactory use of magnesium sulphate locally in erysipelas led me to try it in the treatment of puerperal infection. At first it was given in a 1 per cent solution of saline, about 30 grains at a time. Later it was learned that much greater quantities could be given safely if given slowly. Dr. Harrar of New York has used 250 grains without any alarming effects. Distilled water has been used instead of saline, and there has been fewer chills following its administration. There have been no accidents from its use, and I have given it more than 150 times. It is not bactericidal, but the tissues are stimulated to greater resistance.

The most rational treatment in the beginning of every case of sepsis starting within the uterus is based on a keen appreciation of the pathology. The most important indication is to secure firm contraction of the uterus. The second factor is a healthy respect for Nature's protected zone, in this way limiting the spread of the infection. Good drainage is also an important factor and is secured by placing the patient in a sitting position. Active general measures, such as attention to diet, elimination and fresh air are the important factors in the treatment of puerperal infection.—*The Journal of the American Medical Association.*

Ruptured Ectopic.

Mrs. M., aged twenty-three, widow, was seen in consultation with Dr. Gaston. She gave the following history: Four days previously she had severe pains in the abdomen and vomited several times, the pain continuing until relieved by morphia. During the present attack the temperature ranged between 99 and 101 degrees; the pulse rate, however, remained below 90 beats per minute.

The patient was very obese, and although seemingly quite ill, was reluctant to answer the few questions which I asked her.

There was general tenderness of the abdomen, a little more marked on the right side opposite the umbilicus. The muscles were mildly contracted and the vomiting had ceased. Calomel, salts and a compound enema were diligently striving to produce a bowel movement, and the unseeming reticence of the patient was attributed to this cause.

An opinion was ventured that we were dealing with an acute attack of appendicitis, the fury of which was partly spent; furthermore, immediate operation, though desirable, was not imperative. The temperature and pulse rate at the time of my visit, the fifth day of the disease, were 99.4 and 86 respectively.

Forty-eight hours later her physician called me on the phone and said the patient had a severe pain, followed by collapse; the pulse was rapid, very weak, the patient ashen pale, lips and finger tips were of a bluish color. A diagnosis of ruptured ectopic was

made over the wire and advice given to use large doses of morphia hypodermically, and keep the patient at absolute rest.

I saw the patient a few hours later, at which time she was exceedingly pale. The pulse rate could not be counted by pressure upon the radial artery with the finger.

By the following morning the patient had so far recovered that she was removed to the Good Samaritan Hospital, where an operation confirmed the diagnosis.

Our interne exposed the median basilic vein during the preliminary stage of the operation, and as soon as a clamp was placed upon the right broad ligament began the intra-venous introduction of a decinormal salt solution. The entire amount introduced thus was 1,500 c.c. The rapidity with which the patient's condition improved on beginning the use of the saline was truly remarkable.

The operation was done forty-eight hours after the alrming rupture. The patient was considered by my anesthetist as a hazardous risk from his end of the table, and at his suggestion the salt solution was employed. The anesthetic post-operative recovery was smooth. However, the rosy color which the intravenous injection induced, and with which she left the table, gave way to a ghastly pallor, which was accompanied by extreme weariness, scanty urine, dry skin and an anemic bruit. This condition persisted, despite saline per rectum, copious draughts of water and liberal diet, for many days.

The patient had lost her bruit and long train of symptoms due to loss of blood, and is now ready to go home. This woman lost more blood than any other person whom we have seen, with recovery following ruptured ectopic.—(*Cincinnati Med. News*

An Aid in Obstetrics.

Dr. J. R. Smith (*Med. World*) gives one hyoscine-morphine-cactine (Abbott) tablet in nearly all cases at the beginning of the second stage of labor, or after pains begin to come strong and regular, to save suffering, stimulate and strengthen the pains, and make them come a little farther apart toward the last, thus allowing more rest to the patient and greater dilatation of the

soft parts. He has never had any unpleasant after effects from its use in hundreds of cases. If the forceps and chloroform are needed later on, a point is gained by having given the H-M-C, as it lessons the danger in giving chloroform, and not nearly so much is required. In two cases at a long distance in the country when the chloroform gave out and time meant a life, he used 3 H-M-Cs, completely anesthetizing the patient, as a craniotomy was necessary.—*Critic and Guide.*

Pituitrin Therapy.

In the *Albany Medical Annals* for December, 1913, Albrecht gives us these conclusions:

1. Pituitrin is a powerful stimulant to uterine contraction in labor, the latter nevertheless retaining its physiological character.
2. Its best action is in the second stage, when it is always harmless.
3. It is of value in the first stage with sufficient dilatation of cervix and no obstruction, provided it is given in small doses, otherwise tetanus uteri may occur.
4. Fetal heart-beats may become slowed, but unless labor is too prolonged they regain their normal character.
5. The average dose is one cubic centimeter and is usually sufficient.
6. Repetition of dose is always as effectual as the first admintration.
7. Effect begins three to ten minutes after use and usually lasts an hour.
8. Postpartum conditions are normal.
9. As noted previously, the contraindications are but few.
10. It is of value as a cardiovascular stimulant.
11. It shows beneficial results in amenorrhea, menorrhagia, and allied conditions.
12. It will undoubtedly be found valuable in many other conditions, when the relations of the pituitary secretion to the rest of the system receive more study.

Galvanism for Dysmenorrhea.

The large proportion of cases of dysmenorrhea can be readily understood, if each menstruation is to be considered as a miniature labor. (Samuel Wyllis Bandler, *Archives of Diagnosis*, January, 1914). We have the outflow of blood, we have the contraction of the uterus. In labor, we have varying degrees of pain, depending much on the individual ability to stand pain well, or poorly. The same conditions hold good in many of the cases of dysmenorrhea; there is a hypersensitive uterus, or the patient is constitutionally of the hypersensitive type.

To perform a surgical dilation of the cervix and to make this dilation more or less permanent by the use of an intracervical stem or by a cutting operation without first knowing that the cervix is the main offender, leads often to a disagreeable disappointment.

The only painless and non-injurious method of dilating a cervix in office practice, which I have found to be advisable is that with the aid of the galvanic electric current. Aluminum sounds of various diameters are used, always of a caliber smaller than the size which might be used if a little force were applied. A large plate is applied to the abdomen, or under the sacral region, the negative pole being the intra-uterine one, and a current of from 5 to 10 milliamperes is used for a period of 5 to 15 minutes. The action of the negative pole within the cervix causes a relaxation of the fibers with a resultant dilatation of the canal so that the intrauterine sound slips out, as if a grasping hand had opened. At the same sitting, or at the next application, the first electrode may be changed for one somewhat larger, and this may be repeated as judgment dictates, always drawing the electrode out as soon as the patient experiences pain or discomfort. The negative pole within the cervix produces, especially if a white or yellow secretion be present, an oxidation of the secretion with the resultant production of a bubbling composition such as H_2O_2 produces with a purulent discharge. If the electrode fits too closely in the cervix, and there is no egress for this product, there is an increase within the uterine cavity, and in the cervix and

pain results. If 1, 2 or 3 treatments on successive days before the onset of menstruation and its associated pain, result in a painless menstrual flow, it is a fairly satisfactory proof that the cervix plays an important part in the production of pain in this particular individual.—*Medical Review of Reviews.*

Editorial

PUBLISHER'S NOTICE—The Journal is published in monthly numbers of 48 pages at $1 00 a year, to be always paid in advance.

All bills for advertisements to be paid quarterly, after the first insertion of the quarter.

Business communications, remittances by mail, either by money order, draft, or registered letter, should be addressed to the Business manager, C. S. Briggs, M. D. corner Summer and Union Streets, Nashville, Tenn.

All communications for the Journal, books for review, exchanges, etc., should be addressed to the Editor.

MEDICAL EDUCATION.

We wish to call the attention of our readers to the fact that next fall the new entrance requirements for the medical department of Vanderbilt University go into effect and ask their aid in helping to disseminate this knowledge in order that as few men as possible will make the trip to Nashville with a view of commencing the study of medicine, only to find out that they are not eligible. We wish also to remind our readers that the term commences in the latter part of September and continues until the middle of June.

Since these facts mean that at least five years—one in the literary department of some reputable university and four in the medical department—must be devoted to hard study before graduation, one should consider carefully before advising and boy who is not a lover of study and science, to enter upon the study of medicine. Another thing to consider is the financial side. Heretofore a boy could often make enough between May and October to carry him through the next term. At present, however, with less than three months' vacation it will be difficult for anyone who is working his way through college, to accumulate anything like the sum necessary to meet his expenses during the following session in college. Furthermore, it is only a question of a few years before a year's hospital work will be required before a graduate of a medical school can take

the State Board examination. Such a change may occur in the next few years. So any prospective medical student should be warned of this probability. Whether these changes will mean fewer doctors in the future we are not prepared to say. That the graduates as a whole, however, will be better qualified to practice medicine goes without saying. W. T. B.

The Food and Drugs Act of Tennessee.

The Food and Drugs Act of this State prohibits adding to the food and drugs consumed in the State deleterious ingredients, and likewise enforces the sale of such materials for what they are. In other words, it prevents the addition to them not only of materials which are harmful, but of those which are useless, and the addition of which unduly cheapens the product without notice to the consumer. It conserves public health by insuring the purity of foods, conserves public morality by making manufacturers tell the truth about their goods, and helps to keep down the cost of living by insuring to all foods the nutritive effect which properly belongs to them. The consumer's pocket is protected by it because it prevents the sale of adulterated stuff at the price of pure goods. Although not its primary object, it has afforded to the honest merchant the greatest protection of any recent legislation, because it has brought out from under cover the rottenness of dishonest goods, so that merchants now know the exact character of goods sold by competitors. In this way, it has given stability to the food trades, preventing illegitimate competition and minimizing the effects of trickery. Finally, it has been one of the most potent of the legislative agencies invoked in that fight for justice to the common people and for better conditions of life, which has attained such considerable dimensions in the last decade, but in which so much more still remains to be done.

Various phases of the enforcement of this law will be treated in detail, such as a consideration of the individual foods and drugs how they are made, and how they are adulterated.—*Lucius P. Brown, State Food and Drug Commissioner.*

Post-Graduate Work in Asia.

Though the writer has taken post-graduate work in Europe on three different times he was somewhat surprised when nearing the chloroform age to discover that he was doing some very valuable study along time-post graduate, in Asia. In Palestine I had the run of a large leper hospital. Leprosy had not been among the cases treated by me. While in India there were reported from five to six thousand cases of bubonic plague a week in that country. Asiatic cholera and smallpox were also epidemic in many parts of the country. In fact in the city of Bangalore, when I visited it in January, 1914, all these diseases were epidemic, and there was hydrophobia also there, a number of soldiers having been bitten by a pet monkey. At Tokyo, Japan, there was an epidemic of typhus fever, fleck typhus, as they call it there. Three thousand cases were admitted to the Infectious Hospital in Tokyo during the months of March, April and May, 1914. Having been a student at Berlin with the well known bacteriologist, Kitasato, of Tokyo, and having met him at the Congress for the Arts and Sciences at St. Louis during the Exposition there, I called upon him. He said he remembered me, which I doubt, and treated me very kindly. He gave me cards which gave me entre to medical Japan. I proceeded to the Hospital for Infectious Diseases in Tokyo and was shown through it and saw a large number of cases of typhus in all stages. There were but few in the very early stages, but some, as the epidemic is fast disappearing. None of these cities seemed alarmed about the epidemics in their borders, nor did the outside world take special precautions against them. This was perhaps due to the Taisha Exposition in Tokyo and to the Dowager Empress' funeral, which was just about to occur. Besides this, I met a number of young medical men who, in hospitals and in private practice were doing more work and more good in Asia, seeing more and learning more than they would do in a long time at home. The ship's young surgeon on the steamer on which I crossed the Pacific had eighty cases of hookworm disease on board. They were Chinese steerage passengers and would not be allowed to land unless cured on the

way. The Pacific Mail paid him, in additional to his salary, $5 for each case of hookworm disease he cured. It is said that the Chinese make a practice of getting on a Pacific Mail steamer bound for America to get cured of hookworm disease free. This young ship surgeon, just two years out of college, would wait a long time before he would have 80 cases of that disease on hand at once in private practice. I would recommend Asia as a post-graduate school.—*E. S. McK.*

United States Civil Service Examination.

Assistant Epidemiologist, Male ($2,000-$2,500). July 6, 1914.

The United States Civil Service Commission announces an open competitive examination for assistant epidemiologist, for men only. From the register of eligibles resulting from this examination certification will be made to fill vacancies in this position in the Public-Health Service, at salaries ranging from $2,000 to $2,500 a year, and vacancies as they may occur in positions requiring similar qualifications, unless it is found to be in the interest of the service to fill any vacancy by reinstatement, transfer, or promotion.

The duties of this position will be to conduct laboratory studies of disease, to make epidemiological surveys to determine the prevalence and causation of epidemics, and to recommend measures to prevent and control outbreaks of disease.

It is desired to secure persons thoroughly competent in the various branches of sanitary bacteriology, and especially in isolating the typhoid bacillus from infected persons and materials.

Competitors will not be assembled for examination, but will be rated on the following subjects, which will have the relative weights indicated:

Subjects.	*Weights.*
1. General education and medical training	25
2. Laboratory experience	30

3. Experience in epidemiological work	35
4. Publications or thesis	10
Total	100

An educational training equivalent to that required for graduation from a medical school or college of recognized standing, and at least three years' experience in epidemiological work under Federal, State, or local authorities, and experience in laboratory technic, especially in regard to typhoid fever, are prerequisites for consideration for this position.

If a thesis is submitted under subject 4 it must present the results of original research work in some sanitary subject.

Statements as to education and experience are accepted subject to verification.

Applicants must have reached their twenty-third but not their fortieth birthday on the date of the examination.

This examination is open to all men who are citizens of the United States and who meet the requirements.

Persons who meet the requirements and desire this examination should at once apply for Form 304, and special form, stating the title of the examination for which the forms are desired, to the United States Civil Service Commission, Washington, D. C.; the Secretary of the United States Civil Service Board, Postoffice, Boston, Mass., Philadelphia, Pa., Atlanta, Ga., Cincinnati, Ohio, Chicago, Ill., St. Paul, Minn., Seattle, Wash., San Francisco, Cal.; Customhouse, New York, N. Y., New Orleans, La., Honolulu, Hawaii; Old Customhouse, St. Louis, Mo.; or to the Chairman of the Porto Rican Civil Service Commission, San Juan, P. R. No application will be accepted unless properly executed, excluding the medical certificate, and filed with the Commission at Washington, with the material required, prior to the hour of closing business on July 6, 1914. The exact title of the examination as given at the head of this announcement should be stated in the application form.

Issued May 25, 1914.

Reviews and Book Notices

"Brain and Spinal Cord"—A Manual for the Study of the Morphology and Fibretracts of the Central Nervous System. By Dr. Med. Emil Villiger, Privatdozent in Neurology and Neuro-pathology in the University of Basel. Translated by George A. Piersol, M.D., Sc.D., Professor of Anatomy in the University of Pennsylvania. From the Third German Edition, with 232 Illustrations. Price $4. J. B. Lippincott, Co.

We acknowledge with thanks to the publishers the receipt of the third edition of this excellent manual. For thoroughness, clearness and conciseness it has few equals. It is conveniently divided into three parts. Part I deals with morphology; in Part II the fibre-tracts are described. while in Part III there are illustrations of the entire brain stem made by the author himself from microscopic sections, serially made. The book is so thoroughly illustrated that it is easy to understand the text without having sections of the brain at hand, which should make the book popular with the general practitioner. We take great pleasure in recommending this work to the profession and trust that its popularity will be in proportion to its merits.—W. T. B.

Genito-Urinary Surgery"—Surgical Diseases and Injuries of the Genito-Urinary Organs. With 27 color and 21 black and white plate and 279 illustrations in the text. 8vo. 790 pages. Price $7. Funk & Wagnalls Co., Publishers, New York.

We are unusually pleased with this excellent and timely text-book on Genito-Urinary Surgery. It is decidedly the best work of recent years on this important branch of surgery. It covers the field completely; it is well arranged throughout and the text is concise, clear and readily followed by the reader. The illustrations form a most attractive feature, the colored plates especially illuminating the text in a most gratifying manner. The work is unusually well balanced, each part being in well-proportioned relation. We feel sure that the work will rapidly become popular as a text-book for students and a reference book for practitioners and in our opinion it will richly deserve all kinds of

success. We have taken great pleasure in looking over this book and tender to author and publishers our heartiest congratulations on having presented a book of such great practical value to the profession.

"Practical Therapeutics"—Including Materia Medica and Prescription Writing, with a Description of the Most Important New and Non-Official Remedies Passed Upon by the Council on Pharmacy and Chemistry of the American Medical Association. By Daniel W. Hoyt, M.D., Formerly in Therapeutics, University of Pennsylvania; Fellow of the College of Physicians; Assistant Physician to the Philadelphia General Hospital. Second Edition. Revised and Rewritten. St. Louis. C. V. Mosby Co., 1914.

This is the second edition, thoroughly revised and rewritten, of an exceedingly practical and valuable text-book. The student will find it of the greatest help in his studies and the practitioner a most convenient reference handbook. A very commendable feature of the work is the arrangement of the text. The reader can, at a glance, get the drug, its physiological action and in most cases specific action on the different organs. The texicology of drugs and treatment and therapeutical medications and contra-indications. Recent progress in every part of the therapeutic field is carefully winnowed and all advances exhaustively noted. The work has a great deal to commend it and will become popular with the profession.

"Progressive Medicine"—A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences; Edited by Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College, Philadelphia; assisted by Leighton F. Apleman, M.D., Instructor in Therapeutics, Jefferson Medical College, Philadelphia; June 1, 1914; Lea & Febiger, Philadelphia and New York.

This is an unusually attractive number of the well-known quarterly publication. The following are the contents of this volume: Hernia, by William B. Coley, M.D.; Surgery of the Abdomen, Exclusive of Hernia, by John G. Gerster, M.D.; Gynecology, by John G. Clark, M.D.; Diseases of the Blood, Diathetic

and Metabolic Diseases, Diseases of the Thyroid Gland, Spleen, Nutrition and the Lymphatic System, by Alfred Stengel, M.D.; Ophthalmology, by Edward Jackson, M.D.; Index. The publishers are to be congratulated upon the production of such a serial and the editors upon the exceptional character of their work. The contributors to the volumes are all well known as authoritative upon the subjects they represent. We can not do more than urge any practitioner who desires to keep in the van of modern progress to subscribe to this valuable publication.

Publisher's Department

Acute Catarrhal Vaginitis.

Dr. ———— reports the following:

Case 1—Miss J——, age 26,, consulted me October, 1899; found her suffering from acute catarrhal vaginitis. Examination by miscroscope showed presence of gonococcus. Disease was well advanced and discharge was profuse, acrid and excoriating.

Treatment—She reported that she had been treated with different irrigations, such as potass. permang, etc., without improvement. Douches were ordered, solution Glyco-Thymoline 10 per cent and tampons saturated with Glyco-Thymoline full strength. Cure was made in less than 10 days.

Have seen this patient frequently, and she reports that she is entirely well and that there is no recurrence of former trouble.

Case 2—Mrs. R——, age 36. Prolific granular degeneration of the endomentrium. Was suffering from the usual conditions and symptoms of this trouble. Curetted and packed with gauze saturated with glyco-thymoline full strength; under this treatment recovery was rapid and complete.

"Robinson's Elixir Paraldehyd."

Ten per cent. Paraldehyd is hypnotic and anodyne. It calms restlessness and insomnia, and procures unbroken sleep from four to seven hours duration, and to leave behind neither languor, nausea nor digestive disorders. It also acts as a diuretic. It has been found efficient in the insomnia of various acute diseases, and also in acute Mania. It is proposed as possessing the good without the evil qualities of chloral. (Nat. Dis., 3d Edit, P., 151.) Robinson-Pettet Co., incorporated. (See adv. in this issue.)

NASHVILLE JOURNAL
— OF —
MEDICINE AND SURGERY

CHARLES S. BRIGGS, A. M., M. D., Editor

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Original Communications

THE TWENTY-THIRD ANNUAL REPORT OF SURGICAL OPERATIONS AT THE PRIVATE INFIRMARY OF DRS. CHAS. S. AND SAMUEL S. BRIGGS.

Reported by
W. T. BRIGGS, M.D., Nashville, Tenn.

The twenty-third season began September 1, 1913, and closed August 1, 1914. The character of the work done is shown in the report of the following selected cases. The mortality seems high, but is due to a number of cases hopeless involved. Infections have been practically banished by care and improved methods. The A. C. E. mixture is still the anesthetic of choice, though chloroform was used frequently. Local anesthesia was used more than formerly, the combination of novocaine and adrenalin being used. In most cases anoci association was carried out. The amount of anesthetic used may seem large, but at least 70 per cent is used in inducing anesthesia, very little being required to maintain the condition.

Case No. II. Inguinal Hernia. Bassini. C. B., Atlanta, Ga. Admitted September 4. This patient presented a complete oblique inguinal hernia of the left side. After the usual preparatory treatment the patient was anesthetized with the A. C. E. mixture and a four inch incision was made parallel to and an inch above

Poupart's ligament, exposing the aponeurosis of the external oblique muscle. The pillars of the external ring were exposed thoroughly and the intercolumnar fascia was divided, the line of separation being continued through the fibres of the aponeurosis to the level of the internal ring, exposing the hernial sac, which was lifted from its bed in the canal. The spermatic cord was separated from the sac and held aside by an assistant, while the lower arched fibres of the internal oblique and tranversalis were cleared. The sac being freed, was drawn down and its neck was closed by a mattress suture of catgut. The sac was then divided and removed entirely. The posterior wall of the canal was reinforced by carrying mattress sutures of chromatized catgut through the shelving process of Poupart's ligament, and the lower arched figres of the internal oblique and transversalis muscles. The cord was then replaced and the aponeurosis was closed over it by a continuous catgut suture, using care not to strangulate the cord. The skin wound was closed by a continuous catgut suture, and the usual dressings were applied. The patient made an uninterrupted recovery and was dismissed October 3.

Case No. IV. Hemorrhoids—Ligation. W. F. D., æt. 42, Sardis, Tenn., admitted September 9. This patient had suffered for seven years from extensive rectal tumors, which were frequently inflamed and bled constantly. Under A. C. E. the sphincter was thoroughly divulsed and each pile was ligated after encircling its base with an incision through the muscosa. The masses were then excised. The case was complicated woth quite a large ulcer above the pile-bearing area, which required the frequent application of argyrol. The patient was entirely relieved and dismissed October 3.

Case No. V. Amputation of Breast for Carcinoma. Mrs. L., æt. 46, Paris, Tenn. Admitted September 16. This patient presented a hard nodular mass in the right breast, with enlarged axillary glands. Under A. C. E. the breast was encircled by an elliptical incision, the upper limb of which was extended out along the margin of the pectoral muscle. The breast was removed with the pectoral fascia and the pectoral portion of

the muscles was also removed. The axillary space was easily cleared of glands and cellular tissue. The wound was closed with worm gut sutures and the arm was immobilized by a bandage. The wound healed kindly and the patient was dismissed October 4.

Case No. VII. Congenital Inguinal Hernia. C. P., æt. 18, city. Admitted September 16. This patient presented a congenital hernia of the right side with the testicle retained in the canal. After the usual preparatory treatment the patient was anesthetized with A. C. E. A free incision was made parallel to Poupart's ligament, exposing the aponeurosis. The external ring was carefully exposed and enlarged outward by dividing the intercolumnar fascia, and separating the fibres of the aponeurosis; beyond the site of the internal ring the sac and cord were then freed and lifted out of the canal and the internal ring was demonstrated. The neck of the sac was freed well into the ring. The sac was opened and the testicle, only partially descended, was removed after the vessels were tied. With it was removed the sac, the neck of which was secured with the ligatures of the cord. The lower arched fibres of the internal oblique and tranversalic were drawn to the shelving process of Poupart's ligament by mattress sutures of chromatized catgut. The internal ring was thus obliterated and the external ring was reduced to the smallest dimensions by a continuous catgut suture. The external wound was closed by a continuous catgut suture. The convalescence was uneventful and the patient was dismissed October 11.

Case No. VIII. Chronic Appendicitis. Miss H. H., æt. 20, Ownesboro,, Ky. Admitted September 25. This patient had suffered for some time with digestive troubles with frequent abdominal pains and was quite tender over McBurney's point. After the usual preparations the patient was anesthetized with A. C. E. and an incision was made along the linea semilunaris, into the sheath of the right rectus, which was displaced toward the median line and the cavity was entered through the posterior layer of the sheath. The appendix was readily delivered and its meso was secured with catgut. The appendix was

removed and its stump was invaginated by a purse string suture of catgut. The wound was closed by three through and through worm gut sutures supplemented by seriatim catgut sutures. The patient was greatly relieved and left the Infirmary October 19.

Case No. X. Inoperable Carcinoma Uteri. Mrs. W. M. B., æt. 42, Erin, Tenn. Admitted September 16. This patient had suffered for some months with pain of pelvic origin and a fetid vaginal discharge with frequent irregular hemorrhages. Examination disclosed an extreme condition, the cervix having almosst disappeared from ulceration. The uterus was firmly fixed, hard and nodular. Palliative treatment was instituted and after curetting thoroughly the parts were regularly irrigated, giving the patient relief from suffering. The patient grew progressively weaker and died shortly after returning home.

Case No. XI. Hysteropexy Oöphorectomy and Appendectomy. M. P. J., æt. 17, city. Admitted September 30. This patient had always suffered at her monthly periods and in September had been confined to her bed on account of severe abdominal pains and quite high fever, which persisted for two weeks. On account of the pain, she submitted to an examination, which disclosed a marked retroflexion of the uterus, with a prolapsed left ovary, and a very tender appendix. The course of the fever was very irregular, there being remissions of several days. On October 14 the patient was anesthetized A. C. E., the abdomen was opened in the middle line and the left ovary removed. The appendix was removed and the uterus was suspended by two twenty-day catgut sutures. The wound was closed with four wormgut sutures after coapting the fascial layers with catgut. The wound healed by first intention and the patient was entirely free from fever for two weeks, after which the patient had the same irregular fever as before. For three or four days she presented a high temperature, followed by three or four days of normal temperature. This kept up for five weeks. The patient returned home November 13 but was confined to her bed on account of the fever for three weeks more.

Case No. XIII. Acute Appendicitis. Mrs. M. P., æt. 22, Martha, Tenn. Admitted September 29. This patient was suffering pain in the right half of the abdomen with marked tenderness over McBurney's point. Temperature 101, pulse 110, respiration 30. The patient was hurriedly prepared and anesthetized with A. C. E. The usual incision was made through the sheath of the rectus and the swollen and inflamed appendix was delivered. Hemorrhage was troublesome but perfect hemostasis was finally secured, and the wound was closed by the combined through and through and seriatim sutures. The convalescence was uneventful and the patient was dismissed October 15.

Case No. XIV. Trachelorrhaphy and Perineorrhaphy. Mrs. V. L. P., æt. 40, Newark, Ark. Admitted October 11. This patient, a multipara, presented a badly lacerated perineum with the associated nervous symptoms. After several days of preparatory treatment the patient was anesthetized with A. C. E., and the cervix was freely pared and sutured with chromatized catgut. The perineum was repaired after the method of Emmett. The perineal sutures was removed on the ninth day, healing being complete. The patient was dismissed October 28.

Case No. XVI. Carcinoma of Cervix. Vaginal Hysterectomy. Mrs. J. T., æt. 42, Nashville, Tenn. Entered October 16 for the treatment of persistent metrorrhagia. Vaginal examination disclosed an indurated ulcer on the posterior lip of the cervix, extending well up into the canal. Examination caused profuse hemorrhage. The uterus was freely movable and the depth of the womb was not materially increased. After three days of preparatory treatment, the patient was anesthetized with A. C. E., and the uterus was removed without difficulty. -The ap pendages were left. The wound of the vaginal walls was sutured around a drain extending into the pelvic cavity, and the ligated stumps of the broad ligaments were approximated by sutures. The ligatures came away on the tenth day and the patient was dismissed November 7.

Case No. XVIII. Tetanus from Wound of Thumb. J. E. M., æt. 28, Alexandria, Tenn. Admitted October 27 for treatment

of tetanus supervening upon a wound of the thumb received in a provender cutting machine. The thumb was amputated at his homeplace at the first joint and the patient seemed to be doing well until about the sixth day, when he was out driving cattle and was for some time in a hard rain. Symptoms of tetanus set up and his physician at once put him on the train and brought him to the Infirmary. The symptoms of tetanus was pronounced and he was carried to the operating room soon after he arrived. Anti-tetanic serum was given and the thumb found to be in a state of gangrene. Under A. C. E. the thumb was amputated at the carpo-metacarpal articulation. Morphine and chloral were administered sufficiently to control the convulsions but the patient sank rapidly and died on the third day.

Case No. XIX. Loss of Lower Lip. Cheiloplasty. J. I. L., æt. 14, Huntsville, Ala. Admitted October 17. This patient had lost the entire lower lip during infancy from salivation, and was unable to control saliva. Under chloroform a curved incision was made around each corner of the mouth, the narrow strip thus formed carrying the mucous border. These strips were approximated so as to form the border of the lower lip. Quite a large area over the chin was cicatricial and required removal. Two incisions curving down and backward from the chin into the skin of the neck marked two flaps which formed the body of the lip when united. These parts were secured with wormgut and horsehair sutures. The inner surface of the new lip was poorly supplied with mucous membrane and became adherent to the gum, though the membrane covering the gums seemed normal. The functional results was satisfactory but the cosmetic fell short of expectation.

Case No. XXI. Acute Appendicitis. J. B. M., æt. 63, city. Admitted October 25. This patient had had several severe attacks of appendicitis, but on account of his age and poor health, operation was put off until this attack. He had suffered for several days, presenting a large mass in the right side which was extremely tender. Under A. C. E. an incision was made over the mass and a pint of foul pus was evacuated. A search

was made for the appendix, but it was so buried by adhesions that it was left. The abscess was packed with gauze around a rubber drain. When this was removed on the third day, fecal matter escaped. The character of discharge changed at the end of the week and the wound healed rapidly. The patient very slowly recovered his strength and was dismissed November 22.

Case No. XXIII. Severe Hemorrhage from Trachelorrhaphy. Mrs. C. E. H., æt. 22, Hartsville, Tenn. Admitted November 2. This patient was badly lacerated in confinement. The cervical tear was very extensive on the left, and in healing there was formed a heavy strong band in the wall of the vagina which tilted the uterus. The perineal tear exposed the sphincter ani. Under A. C. E. the above mentioned adventitious band was divided in order to draw down the uterus. The laceration was freely pared and closed with chromatized catgut. The perineum was repaired after the method of Emmett. On the second day after the operation there was a copious hemorrhage and it was necessary to remove the perineal sutures in order to reach the source of hemorrhage which was from the wound made by dividing the band in the vaginal walls. This wound and the vagina were tamponed, but on the removal of the tampons the hemorrhage recurred. An effort was made to ligate the vessel but without success. The wound and the vagina were again tamponed with gauze saturated with a gelatin solution, after which the hemorrhage did not recur. The perineum was left for future operation. The patient was dismissed December 1.

Case No. XXV. Troublesome Epistaxis. S. L., æt. 57, city. Admitted October 23. This patient had bled profusely from the nose in the early morning and was sent to the Infirmary, and efforts were made to control thē hemorrhage by spraying the cavities with a solution of adrenalin, which controlled it temporarily. The hemorrhage recurred the following night, when it was necessary to plug the posterior nares, using a Bellocq canula. The blood pressure after these profuse hemorrhages was 170 and subsided slowly under the influence of veratrum and rest in bed. On removal of the tampons the hemorrhage recurred and re-

quired the re-application of the plugs. Finally the tampons were saturated with a gelatin solution which seemed to control the hemorrhage which recurred, but in slighter degrees. The patient was dismissed October 18.

Case No. XXVII. Infection by Bacillus Welchi. Mrs. H. D., æt 31, Shackle Island, Tenn. Admitted November 8. This patient was brought to the Infirmary in an extremely septic condition, presenting a large ulcer over the sacrum and a greatly swollen thigh which was extremely hyperesthetic and was crepitant on pressure. The history of the case showed that two months before confinement she had received a fall on the sacrum, an abscess formed and the overlying tissues sloughed. At term she was delivered of a dead child and part of the placenta was retained and became septic. This was removed by the nurse but the septic condition continued. Eventually the right thigh became extremely painful, exquisitely tender and greatly swollen, giving crepitus on pressure. Under A. C. E. an incision was made into the abscess and a large quantity of gas and thin, sanious pus was evacuated. The cavity was thoroughly irrigated and a large rubber drain was introduced with gauze packed lightly around it. The wound drained profusely, requiring frequent dressings. The septic condition was not relieved, and after ten days she died.

Case No. XXVII. Appendectomy and Oöphorectomy. Mrs. L. R., æt. 28, city. Admitted November 12. This patient had been a great sufferer for a number of years, the suffering being accentuated at the menstrual period. Under A. C. E. the abdomen was opened in the middle line and the right ovary, which was cystic, was removed. The appendix was then delivered and after ligating, the meso was removed; the stump was buried by a purse-string suture. The retroflexed uterus was sutured to the anterior wall with kangaroo tendon and the wound was closed by five through and through wormgut sutures, after a careful closure of the peritoneum with catgut. The patient was entirely relieved and was dismissed November 29.

Case No. XXX. Crushed Hand. W. M. B., æt. 51, city. Admitted November 22. The patient presented a bad contusion of the right hand and the dorsum severely lacerated. The wound had been dressed several days before admittance and had become septic. The hand was severely inflamed and a great deal of sloughing occurred. The extensor tendons, with the exception of those of the thumb, were lost and exfoliations from the bones made their appearance at frequent dressings. After the separation of the sloughs and exfoliations the inflammation subsided, leaving a badly crippled hand.

Case No. XXXIII. Lacerated Wounds of Scalp and Face. Contusion of Right Chest Wall. Miss H. L. H., æt. 19, Nashville, Tenn., was brought to the Infirmary December 10, suffering from wounds sustained in an automobile accident. There were two long, deep lacerated wounds of the scalp over the right parietal bone, a wound extending from the external angular process of the frontal bone downward and backward across the zygoma and into the external ear and a brush wound over right scapula. The head was shaved on right side and prepared for operation. Under A. C. E. anesthetic a thorough examination for fracture was made but none detected though the bone lay exposed in the scalp wounds. The temporal artery could be seen pulsating in the posterior part of the facial wound. The wounds were thoroughly irrigated with normal saline, the edges approximated and dressings applied. Examination of the chest at this time was negative. For several days after injury the patient suffered excruciating pains in her right side and neck on movement so that some serious lesion was suspected, but no definite pathology could be found. The wounds healed rapidly and the patient was dismissed on the tenth day still suffering, however, with her neck and side.

Case No. XXXVI. Castration. Local Anesthesia. G. W., æt. 57, city. Admitted January 27. This patient presented a very much enlarged and tender right testicle which caused great discomfort on account of the size and weight. Novocain with adenalin was used as a local anesthetic, the patient directing its administration. The cord was exposed and the vessels were sev-

cred separately and the cord was divided. The testicle was then stripped out of the scrotum. The wound healed by first intention and the patient was dismissed February 8.

Case No. XXXIX. Salvarsan. H. N., æt. 28, Hartsville, Tenn. Admitted February 17. This patient had been under treatment by his physician for some time but the skin manifestation refused to yield to ordinary treatment and was sent to the Infirmary for the administration of 606. The median basilic was exposed by a short incision and the needle was introduced into the vein, and a ligature was placed temporarily around both vein and needle. It was then tested with normal saline. The salvarsan solution was then slowly introduced. There was no leakage. The patient was then put to bed. The reaction was slight, and after two days he returned home. There was some induration about the wound and after three weeks the wound opened and discharged for a few days. The luetic symptoms disappeared rapidly.

Case No. XLI. Ventral Hernia following Appendectomy. N. W., æt. 32, Paris, Tenn. Admitted January 12. For the relief of ventral hernia resulting from an operation for suppurating appendicitis. The orifice of the hernial sac was situated to the right of the upper end of the cicatrix. Under A. C. E. the cicatrix was dissected out and the ring exposed. The edge of the openings were freshened and the peritoneum was sutured with catgut. The sheath of the rectus was opened and that muscle was drawn to the right and secured by sutures between the oblique muscles. The aponeurosis was closed with continuous catgut suture. The skin was closed with catgut, supplemented by clips. The patient made an uninterrupted recovery and was dismissed January 30.

Case No. XLIII. Fistula In Ano. C. N., æt.. 45, Leeville, Tenn. Admitted January 15 for relief of fistula in ano of several years standing. The probe showed a complete anal fistula, the external orifice of which was three quarters of an inch from the anus. Under A. C. E. the following day after entrance the fistula

was incised an a grooved director, the fistulous tract curetted and the wound packed with gauze. The patient made a rapid recovery and returned home ten days after the operation.

Case No. XLIV. Carcinoma of Breast. Mrs. C. B., æt. city. Admitted January 19. The unusual feature of this case was the freedom with which the diseased breast could be lifted from the pectoral muscle. Advantage was taken of this fact in operating. Under A. C. E. the breast was lifted and its base was transfixed, thus quickly removing the offending organ. The fascia was carefully dissected from the muscle, and although no glandular involvement could be detected the axillary space was opened. Its contents were apparently normal. The wound was closed with wormgut sutures and a dressing applied which confined the arm to the chest wall. The sutures were removed on the eighth day and the patient was dismissed February 15.

Case No. XLVIII. Adherent Prepuce. H. A., æt. 4, Goodrich, Tenn. Admitted October 12. This patient was quite nervous and at times extremely irritable, due to exacerbations of preputial inflammation. The orifice was greatly contracted and the urine passed with difficulty. Under chloroform a grooved director was guided over the dorsum of the glands to the corona and the prepuce was split. The adhesions were thoroughly divided and the redundant prepuce was removed. Catgut was employed to unite the mucous membrane to the skin. The wound was dressed with iodoform collodion.

Case No. LI. Tracheotomy. C. J., æt. 4, Robertson County, Tenn. Admitted January 25. This child, while holding a grain of corn in her mouth was tickled by an older child and the corn disappeared, followed by frequent severe coughing spells, during which paroxysms the child became livid. Under chloroform the trachea was opened, following the method of Bose, using a tenaculum to steady the thyroid cartilage while exposing the cricoid. The pretracheal fascia was divided transversely over the cricoid cartilage and was stripped down, exposing the trachea, the upper three rings of which were divided in opening the

trachea. The grain of corn was caught with very little delay and was removed. A silver trachea tube was put in place and dressing of gauze was applied. The patient coughed a great deal during the first few hours, until the trachea became accustomed to the pressure of the tube, which was removed at the end of twenty-four hours. The patient went home the fifth day.

Case No. LIV. Sequestrotomy. O. M. T., æt. 22, Fulton, Ky. Admitted January 23. This case presented a fistulous opening leading to carious bone in the left tibia, and gave a history of typhoid fever. Evidently there had been a severe osteitis, whether of typhoid origin or not. Under A. C. E. a free incision was made through the fistulous opening exposing a cloaca in the involucrum. This opening was enlarged and a large sequestrum was removed. The cavity of the involucrum was freely curetted and packed with gauze, saturated with balsam Peru. The cavity filled rapidly and the patient was dismissed February 21.

Case No. LVI. Appendectomy. Mrs. H. H., æt. 26, Paris, Tenn. Admitted December 10. After the usual preparation this patient, who had passed through several attacks, was anesthetized with A. C. E. and a three-inch incision was made in the right linea semi-lunaris, opening the sheath of the rectus, which was drawn aside and the posterior layer of the sheath and the peritoneum were divided. The appendix was delivered without difficulty. The meso was ligated with catgut and divided and the appendix was removed, the stump being buried by a catgut purse-suture. The wound was closed by the combined through and through and seriatim sutures. The wormgut sutures were removed on the seventh day and the patient was dismissed Dec. 30.

Case No. LVIII. Chronic Appendicitis. Mrs. H. A., æt. 29, Nashville, Tenn. Admitted January 19. This patient had suffered for several years from intestinal indigestion, with frequent attacks of abdominal pain, each attack leaving some tenderness in the right side. Under A. C. E. the abdomen was opened through the right rectus sheath and the appendix was readily delivered. The appendix was kinked on itself by adventitious

bands and was distended with pus. After severing the meso the appendix was removed. Some difficulty was experienced in invaginating the stump; it was buried by four Lembert sutures. The wound was closed by the combined seriatim and through and through method. The skin was approximated with silver clips. The patient made a satisfactory recovery and was dismissed February 7.

Case No. LX. Laceration of Perineum and Cervix. Mrs. J. M. C., æt. 36, Bakerville, Tenn. Admitted February 12. Frequent abdominal pains persuaded this patient to enter the Infirmary. The appendix was found thickened and tender. The cervix presented an extensive tear, as also did the perineum. The patient agreed to a repair of the cervix and perineum, but balked at the abdominal operation. Under A. C. E. the cervix was freely pared and the lacerations were closed by chromatized catgut stutres. The perineum was repaired by the method of Emmett, using catgut for the vaginal sutures and wormgut for the external closure. The perineal sutures were removed on the tenth day, the healing being satisfactory. The patient was still afraid to have appendix removed and returned home March 2.

Case No. LXII. Club Foot. Phelps Operation.— A. W., æt. 2. Davidson Co. Tenn. Admitted February 16. This patient presented a talipes varus of the right foot. Under chloroform the tendo achillis was divided subcutaneously and the heel was drawn well down. A transverse incision was made on the inner border of the foot and the medio tarsal joint was sought and opened. The plantar fascia required considerable division. The wound was packed with gauze and the foot was then held in an over corrected position while a plaster of Paris splint was applied. This was left for two weeks. On opening the splint the wound was found covered with healthy granulation. The plaster splint was reapplied for another two weeks, after which a light brace was used.

Case No. LXIV. Appendicitis. Interval Operation.—B. W., æt. 22, city. Admitted March 8. This patient had recovered

recently from an attack of appendicitis. Under A. C. E. the abdomen was opened through the sheath of the rectus muscle, and the appendix was delivered with some difficulty on account of adhesions. The meso was secured with catgut and the appendix was removed. The stump was buried by a purse string suture. The wound was closed by the combined seriatim and through and through sutures. The wormgut sutures were removed on the seventh day and the patient was dismissed March 22.

Case No. LXVI. Gall Stone in Common Duct. Perforation, Incision and Drainage. C. W. H.,, æt. 50, city. Admitted April 17. This patient had experienced frequent mild attacks of colic and had developed a severe jaundice, but this was not attended with pain, pain occurring on the second day. The paroxysm came on suddenly and with great intensity, producing extreme shock, lasting for forty-eight hours, the pulse being hardly perceptible. Reaction began and preparation were made for operation, when the kidneys struck and the suppression was almost 11--BRIGGS 123789ETASHR ---- complete for another forty-eight hourss, after which time marked swelling was apparent in the right sub-costal region. The patient was hurried to the Infirmary, and under A. C. E. an incision was made over the gall bladder and a large quantity of fluid evacuated. On account of the precarious condition of the patient no search was made. A rubber drain was introduced and the wound was lightly packed with gauze. The patient rallied somewhat, but again lost ground and died seventy-two hours after operation. Autopsy was refused. Evidently the common duct ruptured at the time of the first severe paroxysm.

(To be continued.)

Selected Articles

STERILITY IN WOMEN.*

By Willis E. Ford, M.D., Utica, N. Y.

The problem of the sterility of women is one that has not yet been solved by science. It is one of the oldest questions of a medical nature that has invited serious thought. Statistics show that one marriage out of every eight, among people who are apparently in good condition, fails of offspring. Just why these failures take place is accounted for by men with varying theories, and statistics seem to be of little value. From the nature of the case, statistics collected by mean dealing with hospital patients, or with people who are in a social position that makes child-bearing a burden, and of a moral status that makes it probable that immoral and illegitimate means are employed for the prevention of conception, differ very much from those of men who see another class of people from the better walks of life, who desire children more than anything else in life, and yet who are unable to realize this desire.

There are a few cases of young women, who are apparently healthy and never had any serious illness, excepting menstrual pain and generally a troublesome leucorrhea, usually with an undeveloped neck of the uterus (what used to be called an infantile cervix with small canal) and these women are very liable to develop serious uterine disorders later in life. Sterility is one of these conditions, and I believe that many of the catarrhal disorders of the tubes, requiring serious pelvic operationss later, are also developed without any other cause. It is of these few cases taken before any lesion of serious magnitude has been found, that I wish to speak.

* Read at the Annual Meeting of the Medical Society of the State of New York, April 28, 1914.

The younger men in our profession may not be consulted very much by people who earnestly desire children, and who feel shame in speaking of it. The age and social standing of the physician very materially changes his views regarding this question, because of the greater number of people consulting him who are anxious to bear children; while with the younger men the case is quite different, in that he may see more persons who desire to prevent legitimate pregnancy. I think that the statistics on this subject, therefore, are practically worthless, but I am convinced that men who have a good social standing, and recognized professional ability, see more cases of those who desire pregnancy than are thought to exist in a respectable community. The natural desire for offspring remains, and there are the same number of decent people who want to live wholesome lives, and yet who do not like to talk about it. If we say that statistics show that one marriage out of every eight, in which both parties are supposed to be in normal condition, fails of offspring, we can not draw a general conclusion from this fact that is at all trustworthy.

In the early stages of scientific gynecology the attention of the profession was largely towards conditions of the cervical canal, flexions, versions, and stenoses, that suggested operations upon the cervix and uterus, such as dilatations, divulsions, and the slitting of the lip of the uterus, in the attempt to straighten the cervical canal. It was found, however, that the scar tissue which was left after various surgical procedures about the cervix, often contracted, and was generally inelastic, and sometimes proved as much of an obstruction as the original deformity or disease, and the dysmenorrhea continued, or the sterility persisted. It was later the fashion to dilate and curette the uterus and pack it, on the theory of keeping the neck long enough to allow the exudate into the muscle that was divulsed at the region of the internal os, to stiffen and become permanently fixed in a nearly straight line, by the exudate which occurs from slight inflammatory processes caused by operations. It is quite probable that curettage was often done with such vigor that the endometrium was injured, and sterility actually produced.

It is within the observation of most men that a small contracted uterus with an unhealthy endometrium, follows a severe curetting—even though there was no evidence of septic infection at the time. Stem pessaries of various sorts were used to keep the uterine canal open, under the belief that after they were removed the canal would be patulous enough to permit pregnancy. But I have often wondered whether continuous pressure in the cervical canal would not produce those pathologic changes in the glandular mechanism against which they rest, sufficient to prevent the physiologic function of the organ. The theory of the cervical plug, because of the diseased condition of the so-called membrane lining the cervical canal, has been urged as acting like a stopper of a bottle, to mechanically prevent conception. I have not been able by any treatment that I have tried to convince myself that the cervical canal, especially if it was somewhat stenosed and small, could be made sufficiently normal so that this so-called mucous plug would not recur.

Under proper antiseptic precautions almost any kind of a surgical procedure can be carried out upon the neck or body of the uterus, without material danger to the patient; so that the experiments that have been tried are very numerous. When pelvic surgery by the abdominal route became so safe that one may almost say it became the fashion, great hope was entertained that the treatment of the tubes and ovaries in a so-called conservative way, would relieve many of these cases of dysmenorrheal sterility, independent of slightly abnormal positions and conditions of the uterus. One thing at least has been proved, that pregnancy occurs sometimes after such radical procedures about the adnexa as would seem to render pregnancy impossible. While these cases are rare, the number of cases that afterwards were found to conceive, on account of the conservative treatment of the tubes and ovaries, and the removal of adhesions, etc., has been disappointingly small. Advocates, however, of these radical measures point out the fact, that very small cervices, almost infantile, with a very small canal, have been found to be capable of conception. May it not be said, however, that the natural physiologic changes that may occur in these organs—even when the organs themselves are

practically normal—may cause such tumescence of tissue as to act at times as a bar to pregnancy, and yet escape the observation of the gynecologist. I have no new theory to present in this short clinical paper, but desire to relate my personal experience in this matter, and to state how my attitude toward this condition has changed within the past few years.

When I heard Pozzi* read his paper five years ago it struck me that he advocated correct surgical procedure, and the permanency if the results which he claimed, commended it strongly to my mind. Throwing out, therefore, all those cases of former infections, or the possibility of irregularities of living, or lesions about the uterus and adnexa, otherwise than what was found by vaginal examination as depending upon the lower segment of the uterine canal, I began the operation in a limited number of cases, and have now a small number of cases, thirty-five, to report, with conclusions that seem to me worth while to present. It probably is unfair to compare these statistics with all the other cases where procedures were necessary on account of distinct lesions, or even where gross displacements have existed, which were relieved by other means, and they are not counted in this list.

One of the first cases was that of a man happily married seven years, and whose wife, soon after operation became pregnant, but has not conceived a second time.

The next case was that of a friend of mine, who also had been happily married some six years, for which she had been treated without any serious operative procedures beyond dilatation, douches, etc. It was two years after I operated her before she conceived. She had a small conical shaped cervix. She miscarried at the seventh month, and the accident was said to be due to hanging pictures, etc., during house moving.

One of the early cases, with a child now four years old, has miscarried twice since, at early periods, from what causes I could

* "Surgical Treatment of a Most Frequent Cause of Dysmenorrhea and Sterility in Women." Read before the Am. Gyn. Soc. by Prof. S. Pozzi, of Paris, France, in 1909.

not ascertain. She had been married seven years before operation.

Other reported cases of miscarriage called my attention to this danger, and I have not made the lateral incisions so deep as I did at first. Instead I have incised anteriorly any cicatricial ring found at the internal as, instead of cutting nearly to the internal os, and have packed the entire canal a little more firmly.

Three or four more pregnancies occurred, and then about a dozen were operated that have not yet reported pregnancy. All these cases without exception reported such improvement in function and in general health, that since then I have operated unmarried women in the same way. In these cases dysmenorrhea had persisted with interference in general health from this cause, and especially marked neurasthenic conditions were present.

At first I had no theory as to the reason why the general improvement in health, the loss of nervous symptoms, and the disappearance of local pain and leucorrhea, brought about such uniform results. I have come to think, however, that free drainage and the lessened tendency to permanent congestion is due to the fact, that after this the cervical canal is at all times open enough so that temporary swelling of the glandular structures, due either to the influences accompanying menstruation, or to the influence accompanying certain sexual impulses, which may or not be appreciated as such by the patient, is the reason for this improvement.

There is no question about the functional tumescence of glandular tissue, nor of the fact that it at times persists where the influences, either sexual or menstrual are irregular; and that with the subsidence of this tumescence there is glandular secretion, and that this secretion may be perverted by long continued tumescence, or by irregular and abnormally frequent impulses of this sort.

My examination of the cases months, and even a year after the operation, has shown that this procedure does permanently keep patulous the cervical canal; and that in most cases there is a normal secretion, and a normal appearance of the lips. There must have been some reason why a normally constructed uterus should have a fair sized cervix, and a quarter-inch canal, and a vaginal

cleft, making two lips to the vaginal portion. These cases of dysmenorrhea with perverted secretions, and sometimes with sterility, due to a small conical neck, with a round pin-hole opening, can be converted into a normal looking vaginal cervix by Pozzi's operation, and I believe that the true function of the uterus is in these cases restored in many instances.

As to the operation, it must be confessed that it is sometimes difficult to do, and requires more time than the average cervical operation requires. In my opinion the entire point of procedure is to cover any raw surfaces with mucous membrane, so that no scar tissue will follow. In making the slit on either side of the canal the important thing is to have it so that the anterior lip is as nearly as possible the same size as the posterior lip. The removal of a bit of muscle, or even of exudate tissue of each raw surface, so as to give room to bring the membrane over and cover in the spaces, is sometimes difficult to do. Pozzi uses a knife. I have found that very sharp pointed scissors are better. The catgut used is chromicised and very small. If much tension is put upon the stitches they tear out too soon, and it is usually necessary that a small sharply curved needle be used, to catch up a bit of muscle at the edge of the open cervical canal, in order to make the stitches hold.

To begin with the dilatation which precedes, need not be very extensive, because this operation is not of much use in septic cases; and it is presupposed that no sharp curette need be used; and if there is a cicatrical band at the internal os, it is incised forward to the anterior lip, and a very little iodoform tape is necessary to hold it open, while the two newly formed lips of the cervix are held apart, and surrounded by small straps of iodoform gauze. It is better to have the patient remain in bed three or four days after the operation, before leaving the hospital. Douches of boric acid used in the vagina daily for a week or ten days is necessary.

Formerly I was accustomed to use galvanism for a considerable period in these cases, to develop the uterus, after slitting the posterior neck and divulsion; and I have the history of many cases in which pregnancy followed, even after the lapse of a number of years of sterility. This treatment had to be carried on, how-

ever, for several months, and the results were good for a time; but I do not think they compared with the shorter and more simple procedure advocated by Pozzi, especially with respect to the permanency of results.

I have been at work long enough to follow the history of many young girls for ten years or more, and up to the time of their marriage, and even afterwards; and I am convinced that if early and complete drainage was secured through the uterus by this simple procedure in these few cases of cervical deformity, many of the serious conditions met with later in life could have been prevented and sterility may have been avoided in many instances. —*N. Y. State Journal of Medicine.*

CANCER CONTROL.

By Joseph C. Bloodgood, M.D., Baltimore.

PRE-CANCEROUS LESIONS.

To improve the results, to increase the number of cures of cancer, there are two factors over which we have control—the duration of the disease and the treatment.

Long experience and investigation seem to show that cancer never begins in healthy tissue.

There is always a preëxisting local defect which is benign and in which later there may be a cancerous development.

When this previous defect is situated on the skin or beneath the skin or on the mucous membrane of the lip, tongue and mouth everyone is aware of the little lesion.

These previous defects or local lesions in which cancer may develop may be called precancerous lesions, the complete removal of these precancerous lesions will in my experience accomplish a cure in one hundred per cent of cases, that is, none of these people will die of cancer from a growth in the situation from which the precancerous growth has been removed.

Such cases can not be called actually cured of cancer, but we can be quite certain that such treatment prevents cancer in many if not all of the patients treated.

First, little tumors which may have been present since birth or noticed later in life. These little tumors may occur on the skin as warts, moles or navi. They may be felt beneath the skin as hard or soft nodules the size of shot, peas, beans or larger, or they may be felt deeper as in the breast, thyroid gland, deep in the neck.

Second, unhealed ulcer of the skin and mucous membrane. Here there may be a wound or a burn or some injury or disease which destroys the skin or mucous membrane. The wound never heals or heals badly and then breaks down, the open sore remains for weeks, months or years, often irritated by the patient. At any time, usually after months or years, cancers may develop in such ulcer.

Such ulcers are especially dangerous on the tongue, a week's delay here is equivalent in danger to six months' delay for a like ulcer on the lip.

Third, some form of chronic irritation of the skin and mucous membrane which does not actually destroy it. For example, chronic inflammation and irritation about bad teeth (cancer of the gum never develops about clean teeth). Inflammation and irritations of the mucous membrane of the mouth, lip or tongue in smokers, from chewing tobacco, or from snuff. This tobacco irritation may lead to the formation of white patches (leucoplakia) or ulcers, or thickening of the mucous membrane. Cancer at any time may develop in these areas of irritation.

All of these precancerous lesions, tumors, unhealed ulcers, areas of chronic irritation and inflammation of the skin and mucous membrane are recognized by their hosts the moment they begin. Delay in treatment is due to ignorance, fear or skepticism.

As stated before, treatment in this early precancerous stage, if proper treatment, should accomplish a hundred per cent of permanent cures.

Any treatment which does not completely remove the little tumor or accomplish healing of the ulcer, or completely excise the ulcer, or stop the irritation of the skin or mucous membrane, or any treatment which does not completely excise the ulcer the result of the irritation is more dangerous than no treatment at al.

In this stage good surgery should give one hundred per cent cures.

In this stage bad treatment is dangerous. Far better to delay for good treatment than subject one's self to bad treatment in this stage.

Bad Treatment is incomplete removal of the little tumor or ulcer. Irritating treatment which does not completely destroy the cells in the tumor, ulcer or area of irritation. Such irritating treatments are: application of caustics, curretting, improper use of X-rays and radium, and carbon dioxide snow.

Bad Treatment. These precancerous lesions may in some cases be completely destroyed by the application of caustic salves, or curetting or X-ray or radium, but with such treatment a piece is rarely, if ever, saved for microscopic study.

This treatment is dangerous, first, because it may be incomplete; second, there should always be a microscopic study of a piece of the precancerous lesions, because in some cases cancer developes very quickly and can only be recognized with the microscope.

It takes less time to completely excise such precancerous lesions with a knife (combined with the actual cautery in some cases, in certain localities, for example, the tongue). The operation in most instances can be done under cocaine without pain or discomfort. With good surgery the scar will always be the least possible after any method of treatment.

With such proper surgery a piece of the lesion excised may always be studied at once with the microscope, and the possibility of an early development of cancer recognized. This in some cases would lead to an immediate more radical operation.

My investigation over a period of 20 years with almost 3,000 cases, demonstrates that in cancer in accessible regions like skin and mucous membrane of mouth, lip and tongue, and subcutoneous areas, that is with palpable nodules, ulcers and areas of irritation teaches that good surgery in this pre-cancerous stage should accomplish a hundred per cent of cures, because this early recognition and treatment leads to the complete eradication of the precancerous lesion still benign, or to the recognition of the

earliest stage of cancer by the microscopic study of the piece excised, and thus leads to the radical operation indicated at a period most favorable for the cure of cancer.

Precancerous lesions in the internal organs are difficult to demonstrate and will not be discussed in this paper, but I agree with William and Charles Mayo, and others, that gastric ulcer and the chronic irritation of gall stones and inflammation of the gall-bladder should be looked upon as pre-cancerous lesions and lead to good, approprite surgical treatment in the earliest stage of the disease. This treatment will be indicated by what the patients complain of, because rarely, if ever, can a tumor or ulcer be felt.

The great hope for increasing the number of cures of cancer, and decreasing the number of deaths from cancer lies in the education of the public, and the profession on the significance and potential danger of the precancerous lesion; the education of the surgeon as to the best surgery and the education of the surgeon and the pathologist as to the recognition of the earliest stage of the beginning of cancer in the being precancerous lesion.

The excision of the precancerous lesion has the great advantage of allowing a microscopic study. There is no other way of excluding the possibility of cancer.

The short duration of the precancerous lesion does not exclude cancer. The long duration does not indicate cancer.

The microscopic investigation not only leads to a decision whether it is cancer or not, but if it is cancer, to the type of cancer. These microscopic diagnoses in the precancerous lesions, benign, early cancer, type of cancer, lead to immediate operations, which in some cases are radically different types of cancer.

Any treatment, therefore, which does not allow the examination of a microscopic section is not devoid of danger, and is not the best treatment.

The best results therefore in the precancerous stage, where the factor of the duration of the disease is controlled rests upon good surgery, and good pathological diagnosis.

To repeat, incomplete treatment in this earliest stage often yields worse results than complete treatment in a later stage.

The following results illustrate the relation between the probability of a permanent cure and the duration of the disease when surgery is equally good.

These figures are based upon the per cent of patients who have lived five years or more after the operation without any signs of return of cancer.

In the least malignant forms of cancer of the breast, called adeno-carcinoma, there are 35 patients cured five years or more after operation; this is 76 per cent.

In this group there are 15 patients who came for treatment so early in the disease that a diagnosis could not be made until at the operation when the lump was explored. The diagnosis having been made, the complete operation followed immediately. Every one of these patients have remained well five years or more, that is 100 per cent of cures have been accomplished when the operation has been in the early stage in less malignant forms of cancer of the breast.

In the same form of cancer there have been 20 patients who came for treatment late. Here the diagnosis could be made at once. The same complete operation was performed, the per cent of cures is but 64 per cent.

Results, therefore, in the less malignant form of cancer of the breast can be expressed as follows:

All cases (35) 76 per cent of cures.

Early cases (15) 100 per cent of cures.

Late cases (20) 64 per cent of cures.

The figures 35, 15 and 20 represent the actual number of cured patients, and not the total number subjected to operation, except in the group where was 100 per cent of cures.

The results in the more malignant form of cancer of the breast show the same difference in the results between early and late cases as follows:

All cases cured 92, or 36 per cent.

Early cases 12 cured, or 85 per cent.

Late cases 80 cured, or 33 per cent.

Any woman who has a lump in the breast immediately operated upon has the best chance of a permanent cure. If the lump proves

to be the less malignant, adeno-carcinoma, her chances are 100 per cent; if it is the more malignant medullary or scirrhus carcinoma her chances are 85 per cent.

No one can influence the character of the tumor. This is a factor over which we have no control, but if a woman subjects herself to operation at once for a lump in the breast her worst chances are at least 85 per cent, with a possible 100 per cent. If she delays until the surgeon can tell it is cancer her best chances are 64 per cent if the tumor proves to be adeno-carcinoma; in the more malignant form of cancer, 33 per cent.

The danger of delay is really greater than this, because during this time, the cancer may grow so that no radical operation can be performed. This stage of affairs was present in 27 per cent of all cancer cases.

The per cent of cures for all cases of cancer in which complete operation could be done and in which the period of time since operation is five years, is now 42 per cent. Five years ago it was only 35 per cent. This improvement is due to the fact that women are coming earlier for treatment.

Every woman should know that if she submits to proper treatment within a few days after she feels a lump the chances are one out of three that the lump is not cancer, and the proper treatment will yield 100 per cent of cures. If the lump is cancer, her chances are one out of four that it is the least malignant form of cancer with a possible chance of 100 per cent of cures. At the worst with cancer in this stage the chances are 85 per cent.

Delay, if the tumor is benign, is risky, because at any moment the benign tumor may become cancer. If the lump is cancer when first observed every day's delay must decrease the probability of a cure. Absolutely nothing can be gained by delay.

The difference is the result between complete and incomplete operations for cancer of the breast.

This is best shown in the results after complete operation in the early stages where the probabilities of a cure are best.

In the less malignant adeno-carcinoma there are 11 cases in which it is five years since are incomplete operation, with but one cure (9 per cent.) We have just shown that after the complete

operation in the same state for tumors of like character there are 15 five-year cases with 100 per cent of cures.

For the more malignant type of cancer there are 17 five-year cases without a single cure after incomplete operation. This should be construed with results in the same type of tumor when the operation had been complete in this early stage.

Thirteen five-year cases well, 76 per cent.

We may summarize the results as follows:

Operation in the earliest stage when the diagnosis of cancer can not be made except when the lump is explored.

Adeno-carcinoma, complete operation, 15 cures—100 per cent.

Adenoma-carcinoma, incomplete operation, 1 cure—9 per cent.

More malignant carcinoma, complete operation, 13 cures—76 per cent.

More malignant carcinoma, incomplete operation, 0 cures, (17 cases).

By incomplete operation I mean excision of the lump or breast and later, days or weeks, after the microscopic diagnosis of cancer, the complete operation. We have only one positive cure. In this case the entire breast was removed and nothing further was done.

These figures absolutely prove the importance of a complete operation in the early stage of cancer. Incomplete operation gives worse results than delay with complete operation when the diagnosis can be made without the aid of the microscope.

The properly educated surgeon should always be able to diagnose the early cancerous lump of the breast and perform the complete operation immediately after the exploration, giving the patient the best chance of a permanent cure—from 85 to 100 per cent.

CARCINOMA OF THE LOWER LIP.

The following figures show the influence of delay and incomplete surgery.

1. Benign lesions of the lip, 8 five-year cases, 100 per cent cures.

These are precancerous lesions. In every case the microscopic examination showed no evidence of cancer, but these are the le-

sions that the patients who came for treatment with fully developed cancer of lower lip tell us about as being the little nodule or sore wart which they had observed on their lip for weeks, months or years before the non-resent fully developed cancer showed itself.

2. Lesions of the lip which to sight and touch seem benign, but which under the microscope prove to be early cancer, 9 cures —90 per cent.

The failure to cure in the one case was due, I am sure, to an incomplete operation on the lower lip.

In these two groups it is not necessary to do more than excise the lesion on the lower lip.

3. Fully developed cancer of the lower lip.

When we have removed the lower lip only and not removed the glands we have cured by 7 patients, or 63 per cent. The failure to cure in 4 cases was due to the involvement of the glands under the jaw.

When the complete operation was performed, that is excision of the lesion on the lip and the glands of the neck, there have been 20 five-year cures, or 95 per cent (in cases where these removed glands showed no positive evidence of cancer). If the evidence of cancer was made out by the microscope there are but 6 five-year cures, or 50 per cent.

If the lesion of the lip has had previous treatment and had recurred on the lip, and the recurrence is microscopically cancer, the probability of a cure in the three groups is reduced from 63 to 20 per cent, 95 to 60 per cent, and 50 to 20 per cent. That is, operation for recurrent cancer of the lip reduces the probability of a cure at least 42 per cent.

Similar figures can be duplicated with lesions of the tongue, face, skin of the body and extremities. The same investigation is now complete with over 1,000 lesions of the skin and mucous membranes. These tables will be published later.—*Med. Sentinel.*

Extracts from Home and Foreign Journals.

SURGICAL

Spontaneous Rupture of the Healthy Esophagus.

I. J. Walker states that this condition is most frequently seen in men who are addicted to alcohol. In practically every case rupture has followed vomiting or retching after an abnormally large meal. The point of rupture in every case has been just above the diaphragm. Difficulty in making an early diagnosis in this condition is due to the fact that the symptoms are referred to the upper abdomen and not to the esophagus. The patient is in a state of marked shock with subnormal temperature, high pulse, profuse sweating, and some cyanosis. The respirations are usually slightly elevated. The face is drawn and anxious and the patient lies or sits with the knees drawn upward. Pain is referred to the epigastrium and lower chest, either on the right or left, but usually the latter. There is marked tenderness and board-like rigidity throughout the upper abdomen. Chest examination may show a few rales at the base and sometimes hyperresonance or flatness on percussion, depending on whether there is much air or fluid in the pleural cavity. The picture up to this time is that of acute perforation of a gastric or a duodenal ulcer or acute pancreatitis. As time goes on, and especially if the patient has swallowed any liquid, the symptoms point more to some chest condition. The respirations become rapid and shallow, and the temperature elevated. The chest signs become more pronounced and the heart pushed towards the right, and the area of heart dullness practically obliterated. Aspiration of the chest will reveal fluid and gas. If the former is examined microscopically, food particles may be distinguished. In some cases there will be emphysema of the chest and neck. Very little except palliative measures can be found in the literature concerning treatment of this condition. It does seem possible that should the

diagnosis be made early, there might be some chance of saving the patient by approaching the lesion through the posterior mediastinum, repairing the rent, and draining the mediastinum and pleural cavity.—*Medical Record.*

Rigidity of the Abdominal Wall.

Roux emphasizes the necessity for discriminating between the sudden, circumscribed and transient contraction of the muscles, forming the "muscular" defense," and the true and persisting contracture forming the "wooden" abdomen; with the latter the patient seems to be trying to hold his abdomen rigid even against his will, and nothing can simulate or arrest it. The "wooden" abdomen is the extreme degree of the "muscular defense." It imparts no decisive information as to what is going on below, and after an accident to the abdomen it is of no practical importance, as a rule. But when the abdominal wall grows suddenly hard as a board, without an accident to explain this, it suggests intense irritation below, generally of chemical origin, from perforation of the stomach or upper bowel. It was not evident in a number of his cases of spontaneous hemorrhage in pancreas or adrenals and he noticed it only once, and then very slight, with extra-uterine pregnancy, torsion of genital organs, appendicitis and spontaneous rupture of the rectum. As it is the exception which tests the rule, he concludes by reporting a case in which intense pain throughout the abdomen and kidneys and the persisting rigidity of the abdominal walls compelled a laparotomy. Nothing pathologic was found in the accessible organs but the symptoms subsided. Another attenuated attack seventeen days later terminated in the expulsion of three small kidney stones, since which time there has been no further disturbance.—*The Journal of the American Medical Association.*

External Malleolus, Treatment of Fractures of.

The excision of small fragments of bone involving articular surfaces has given the author such good results in the case of the

shoulder, elbow, and wrist-joints that he determined to try it in cases of fracture of the external malleolus. Among the cases presented is that of a woman aged 40 with an oblique fracture of the fibula involving the malleolus. In spite of careful adjustment of the splints the patient complained of great pain, which continued for several days. On the tenth day after the accident the author exposed the external malleolus by a rectangular incision and, after detaching the external lateral ligament, removed the whole of the external malleolus. The foot was placed at a right angle to the leg and adjusted on a back splint. Next day the patient was comfortable and free from pain. In ten days the wound healed; on the twelfth day she could stand on the foot without pain, and on the fifteenth day went to a convalescent home. Three months later the patient could walk and move about on the injured foot easily, safely, and without pain or stiffness.

This and other cases are good examples of the ease and rapidity with which patients recover after excision of an external malleolus detached by accident. The results are much better than those obtained by the older method of rest or the application of splints, and far better than the repair which follows the newer method of wiring—Sir John Bland-Sutton (*Lancet*, Feb. 7, 1914.)

MEDICAL

The Aerial Conveyance of Infection.

F. H. Thomson and C. Price treated certain infectious diseases in an ordinary ward with the precautions of cloak-wearing, cleanliness, and sterilization. They believe that the infection of measles is probably airborne early in the disease, but that the power of infection soon passes. They also believe that the infection of chickenpox is air-borne early in the disease, but their experience goes to suggest that on and after the third day it is probably not air-borne in their view this probability is the most interesting outcome of the work. For many years the authors have held that

diphtheria infection is not air-borne. No cross infections arose from German measles or from mumps, but the small number of cases treated scarcely warrant any definite conclusion. On the whole, however, from this and previous experience in other wards, the authors tend to the view that these diseases are probably not airborne.—*Medical Record.*

Colloidal Silicon in the Treatment of Simple Goiter.

Report of the case of a young girl whose neck enlarged rather suddenly after she had danced all evening at a ball. The right lobe was especially hypertrophied, pushing foward the sternomastoid muscle. There were no signs of exophthalmic goiter. A series of 4 injections, each consisting of a 3-c.c. ampoule of colloidal silicon, was given at four-day intervals. No pain followed the injections. After the third injection the thyroid became softer and dyspnea was relieved. After the fourth, the neck circumference was less by 3 c.m. Two weeks later, after two more injections of the colloidal preparation had been given, the neck measure diminished 2 cm. further, practically to its normal circumference. Silica had already been used in simple goiter, but not in the colloidal state. The author is convinced that the injections were beneficial in this case and advises a trial of colloidal silicon in both simple and exophthalmic goiter before resorting to operation.—Suard (*Presse Medicale,* October 18, 1913 .

Insolation.

Treatment of an attack of insolation, Woolley says, combines refrigeration with elimination, both active enough to produce good effects without embarrassing organs, such as the heart, which are already damaged. To accomplish the former the practice is to give ice cold packs or baths. To compass the latter recourse is commonly had to stimulants. This latter in Woolley's opinion seems not to be best, except as a last resort. Stimulation of an already burdened organ can do little good and much damage. Hydro-therapeutic methods he believes are of more value

in insolation than drugs. Ice packs or iced baths have a great value, but should not be continued for more than a few minutes at a time and should be discontinued when the rectal temperature has reached 104 F. To replace the water lost to the body before the attack, and to increase elimination, ,there is no better method than infusion of saline solution. If it is true that the oxygen content of the body is low and the acid content high, then such solutions should be alkaline. Woolley believes that such alkaline solutions as those recommended by Fischer are extremely efficacious, whether given by rectum or intravenously, in neutralizing the acids of the body and increasing water elimination by the kidneys. The solution for rectal use he urges should be prepared as follows:

Sodium chlorid	30 gm.
Sodium carbonate (crystalized)	20 gm.
Water	1,000 c.c

The injection should be given slowly enough to allow retention. The time consumed in injecting a liter should not be less than one hour.

For intravenous injection the following solution may be used:

Sodium chlorid	14 gm.
Sodium carbonate (crystallized)	10 gm.
Water	1,000 c.c

This also should be given very slowly.

The effect of these solutions on the secretion of urine, Woolley states, is remarkable, and as a rule they will make it unnecessary to use digitalis. When this latter drug is used, it should be very carefully administered and its effects carefully watched. The use of strychnin is not advised in the active stage of the disease.

Such treatment will dispose of the immediate danger, and when this has been done treatment is symptomatic. In apyrexial heat exhaustion external hydrotherapeutic measures are uncalled for, and treatment should be eliminative and stimulative. The internal hydrotherapeutic methods should be very useful in these cases and should be combined with friction, massage, warm packs with sufficient internal stimulant medication. After recovery from an

attack of insolation great caution must be observed by the patient to prevent recurrences from subsequent exposures to heat.—*The Journal of the American Medical Association.*

The Role of the Flea in the Transmission of Plague.

A recent report of A. W. Bacot and C. J. Martin, of the Lister Institute, England, gives, as the result of a painstaking study, the mechanism by which the flea becomes the infecter of the rat with the bubonic plague and presumably also of the human being, who is so unfortunate as to afford a feeding ground for the infected insect. Under conditions which precluded other modes of infection, Bacot and Martin fed fleas upon infected animals and then transferred them to healthy rats. The remarkable lesson in comparative anatomy, physiology and pathology which unfolded itself is best told in their own words, as follows:

"It was found that two species of rat fleas, *Xenopsylla cheopis* and *Ceratophyllus fasciatus,* fed upon septicemic blood, can transmit plague during the act of sucking, and that certain individuals suffering from a temporary obstruction at the entrance to the stomach were responsible for most of the infections obtained, and probably for all. In a proportion of infected fleas the development o fthe bacilli was found to take place to such an extent as to occlude the alimentary canal at the entrance to the stomach. The culture of pest appears to start in the intercellular recesses of the proventriculus and grows so abundantly as to chose this organ and extend into the esophagus. Fleas in this condition are not prevented from sucking blood, as the pump is in the phaarynx, but they only succeed in distending an already esophagus, and, on the cessation of the pumping act, some of the blood is forced back into the wound. Such fleas are persistent in their endeavors to feed, and this renders them particularly dangerous. Fleas suffering from obstruction do not necessarily perish, and in course of some days the culture obliterating the lumen of the proventriculus may autolyse and the passage again become pervious. They are, however, incapable for the time being of imbibing fresh fluid, and are, therefore, in danger of drying up if the tempera-

ture is high and the degree of saturation of the atmosphere low. Although, as far as our observations go, they withstand dessication quite as well as normal fleas which are not fed, their length of life must be short directly hot, dry weather sets in, and we are led to wonder whether this fact may not, to some extent, explain why in India epidemic plague is confined to the cooler and moister seasons, and particularly why in Northern and Central India the epidemics are abruptly terminated on the onset of the hot, dry weather.—*The Lancet-Clinic.*

Calomel as a Baby's Medicine.

W. T. Marrs, in the *Physicians' Drug News,* thinks that mercury, in some form, is the best baby medicine we possess. Ordinarily, calomel is the best form by which to administer it. In some types of bowel trouble, especially those accompanied by a diarrhea, mercury and chalk is an excellent combination. In coughs and bronchial irritations calomel and ipecac is one of the best combinations that can be given.

There are few baby ailments in which calomel, judiciously administered, will not accomplish certain good results. It acts upon every secreting gland and cell, and is the most valuable cholagogue we possess, although acting indirectly as about all such agencies do. Calomel is,, therefore, a most valuable intestinal antiseptic and is indicated in the majority of gastro-intestinal affections.

Occasionally a child manifests an idiosyncrasy for calomel and many manifest the same by overstimulation of the intestines, resulting in griping, tenesmus, etc. This is rare, however. As a general rule children tolerate relatively large doses, the reason being that the young child's secretions are more copious and mobile than that of an adult. Much of it is "lost" before it can exert any physiological effects. Young children, says Marrs, are not subject to ptyalism, and I have seldom had a child under the age of ten to manifest sore gums after taking the mild chloride of mercury.

The 1-10 grain tablets of calomel and wintergreen are all right for infants. They are also good for children a year old or more, provided enough are taken. I give it to children a year old in one-grain doses and seldom in less than one-half grain doses. Having for twenty years depended on this drug as my one to "swear by" in babies, I have never had reason to "swear at" it. I have learned to give children calomel in free doses, and I have never yet seen untoward results from my method of administration.

When it is desired to impress the young child's system with mercury, as in granular affections, it is well to administer calomel in small doses, say 1-10 grain. I can't see how any smaller doses can exert any benign therapeutic effects. Calomel and castor oil are the best baby medicines, although, like babies themselves, they are old-fashioned.—*The Medical Brief.*

Tuberculosis of the Pulmonary Lymph Nodes and Spine Mistaken for Croup.

M. A. Michaelvitch (Pediatria, St. Petersburg, Vol. IV, No. 1) calls attention to the fact that symptoms of stenosis of air passages may be caused by pressure of tuberculous bronchial lymph-nodes, and it is very important to differentiate stenosis of this kind due to outside pressure and not mistake it for croup. Michaelovitch discusses this question from various points of view, including the etiologic, bacteriologic, pathologic, anatomic, clinical, the course, etc. He comes to the conclusion that frequently, especially when the case is urgent, the differential diagnosis can be partly guessed from the general appearance of the patient, history, percussion, auscultation, etc., but mainly from the fact that in stenosis from tuberculosis the dyspnea or stenotic respiration occurs during both inspiration and expiration, while in croup it is inspiratory alone. The stridor may increase from cryng, coughing, etc., and closely resemble that in laryngeal diphtheria. As it is impossible in an urgent case to exclude diphtheria, he recommends as a prophylactic measure intubation and injection of antitoxin. Later, exact differentiation can be made through

proper clinical, bacteriologic and especially roentgen-ray examinations.—*Pediatrics.*

Bright's Disease Treated with Potassium Nitrate.

I have treated over thirty cases of Bright's disease in the last year successfully with potassium nitrate. I will give a short history of eleven:

First—F. E., barber, 51; drinks occasionally a glass of beer. Urine analysis: December 13, albumen, blood, granular, hyaline and waxy casts; December 16, albumen, blood, no casts; December 25, albumen; December 31, trace of albumen. The next three months sometimes normal, sometimes a trace of albumen. April, urine normal.

In the following four years the urine was normal. Patient died from tuberculosis not long ago.

Second—K. S., musician, 63. October 18, albumen, uric acid, blood, hyaline casts, pus; October 22, trace of albumen, uric acid, no blood, no casts, no pus; October 27, uric acid, no albumen, no blood, no casts.

Third—M. W., baker, 48; drinks moderately beer. September 19, albumen, urid acid, blood, hyaline and waxy casts; September 25, albumen, uric acid, blood, casts; October 5, no casts, no blood, uric acid, trace of albumen.

Fourth—Wm. B., car conductor, 51; drinks moderately beer. January 17, albumen, blood, hyaline and waxy casts; January 20, albumen, no casts, no blood. Patient did not return for treatment.

Fifth—C. S., shoemaker, 71; drinks moderately beer. March 19, albumen, uric acid, blood, hyaline and waxy casts; March 26, albumen, uric acid, no blood, no casts; April 1, trace of albumen; April 20, urine normal. An examination two years later: urine normal.

Sixth—Ch. L., saloonkeeper, 50; potator. April 6, albumen, hyaline and waxy casts; April 13, albumen, no casts. Went to Europe.

Seventh—Mrs. L., 49; abstinent. February 7, albumen, hyaline and granular casts; February 15, albumen, no casts; February 22, albumen; February 29, albumen; March 10, albumen; March 20, albumen; April 9 to April 25, trace of albumen; May 18, normal.

Eighth—Wm. B., cigarmaker, 63; drinks moderately beer. April 2, albumen, hyaline and granular casts; April 17, trace of albumen, no casts; May 15, normal.

Ninth—G. R., physician, 72; is suffering from Bright's disease more than ten years. March 25, albumen 0.5 per cent, hyaline, granular and waxy casts; April 8, albumen, few hyaline casts; April 22, alubmen, no casts; June 7, 0.08 per cent albumen. Discontinued potassium nitrate. June 20, 0.3 per cent albumen, few hyaline casts. From June 21 took regular potassium nitrate. July 8, albumen 0.2 per cent; July 15, albumen, $.15 per cent. Took occasionally potassium nitrate up to September 15. September 15, albumen 0.15 per cent. Took regularly every two hours potassium nitrate. September 26, albumen 0.08 per cent.

Up to date patient takes potassium nitrate one to two times a day, and his urine is free from casts and albumen from 0.08 per cent to 0.09 per cent.

Tenth—S. K., artist, 68 years. December 13, hydrops of both legs and scrotum; urine—albumen, hyaline, and granular casts.

℞ Prisnitz applications, changed every six hours. Elevated position of legs. Potassium nitrate,, 15 grains every two hours. Light diet; four milk punches with egg a day.

December 17, hydrops disappeared; patient can sit up in chair, with legs elevated; December 20, few hyaline casts, trace of albumen.

℞ Potassium nitrate, every two hours, 15 grains. Light diet; four milk punches with egg a day.

December 29, oo casts, no albumen, patient can walk about; January 3, urine normal, potassium nitrate 15 grains three times a day; January 10, urine normal, potassium nitrate 15 grains three times a day; January 24, urine normal. Patient discharged.

Eleventh—H. N., druggist, is suffering frim Bright's disease over ten years. April 5, concentrated urine, granular casts, albumen 0.7 per cent.

℞ Potassium nitrate 15 grains every two hours;
light diet.

April 10, albumen 0.15 per cent; April 17, few granular casts; May 25, few granular casts, albumen 0.1 per cent. The same treatment.

The dose of potassium nitrate is 0.5 to 1.0 dissolved in 20.0 aqua every two hours till the casts disappear and the albumen is reduced to a trace, then the same does three times a day and several weeks after the urine is normal. Potassium nitrate does not disturb the stomach or the intestines, and has no bad effect on the patient. It acts in some cases constipating, and this action has to be neutralized by a natural aperient water taken every morning.

If hydrops is present, I found the most successful treatment "Prisnitz applications," with elevation of the legs over the level of the pelvis.

The diet: Mostly vegetable and farinaceous food, meat sparingly once a day, buttermilk, milk, milk and eggs, with or without liquor.

Under Bright's disease I comprehend chronic and acute nephritis with presence of albumen and casts in the urine.

I will not claim that the disease is curable in the last stages, but I am convinced that it is possible to stay the disease and prolong life.

In cases 1, 3, 5, 7, 8 and 10 was hydrops present.

Case 9 is of ten years' duration. The action of the remedy is made very clear in this case. Till June 7 the albumen was reduced to 0.08 per cent. In the two following weeks the remedy was not taken and the albumen increased to 0.3 per cent,, with the reappearance of hyaline casts. In the next three weeks of treatment it went down to 0.15 per cent, and the casts had disappeared. Up to September 15 the patient took occasionally the remedy and the albumen did not increase. Then the patient took potassium nitrate regularly every two hours, and September 26

the albumen was down to 0.08 per cent.

I had intended to collect more material before publishing my experiences, but on second thought in consideration that the death rate of Bright's is the highest next to tuberculosis, it being 75 per cent of the latter, I would consider it a crime against humanity to delay the publication any longer.—*Maryland Med. Jour.*

OBSTETRICAL

Record of a French Case of Feminine Sexual Inversion.

The study of the phenomenon of sexual inversion as manifested by women is still too young to justify any very diadactic conclusions. The most valuable material bearing on some of the problems involved which can be presented consists of accurate and reliable case reports of which there have been far to few recorded.

With the belief that an accurate report of this kind will be found more interesting and more illuminating than generalizations, I venture to present a translation of an unusually instructive case record.

The observers, Dupony and Delmas, report as follows:

"When one speaks of homosexuality one thinks almost always of masculine amours. But uranism is far from being an attribute of the male sex only; on the contrary, feminine inversion is quite as frequent as masculine. It is, however, more easily concealed, but, on the other hand it finds means for its satisfaction with greater difficulty, often hesitating to break through the restraints of social conventions and innate modesty. Some conspicuous examples, however, bear witness that this is not always the case.

"We wish to report today, following out the observation of a case of masculine inversion presented at the preceding session, on two cases of feminine inversion, and we shall endeavor in pre-

senting them to show the constitutional character of this perversion as it is regarded by Magna, Garnier, and Arnand.

"Jeanne M., dressmaker, twenty-four years old, came to the clinic on October 20, 1904, with the following record registered by Dr. Legras: 'Melancholic delirium, based on mental debility. Auditory hallucinations. *Blesité* imaginary fears. Partial mutism. Says that she is persecuted by everyone; that her mother wishes to kill her and throw vitriol at her. Voices speak to her of death, etc. She came to the *commissariat de police,* declaring that there had been stolen from her savings-bank book, and making incoherent remarks.'

"Neither her ravings nor her hallucinations interest us; we wish to speak only of her homosexual tendencies. She made to us in effect an avowal of a passion which she entertained for her patroness. She loved her in a most extravagant fashion, to the point of not being able to work when she saw her or heard her in the workroom. She would be obliged to stop her work to admire in silence.

"She presented her infatuation to us as a spiritual affection, psychic only, and erotomaniac in consequence, affirming that she experienced no sexual sensations regarding her patroness. 'The love for me,' she declared, 'is not physical love; it is admiration. It is not sensual love; it is mystic love. It is her appearance which pleases me. I would never have thought of sleeping with her. I would have been ashamed of that * * *'

"Nevertheless, when pressed by precise questions, making her enter into the details of her history, it was possible to discover the sexual attraction and the physical desire.

"She was jealous of the husband of her patroness, and informed herself, according to her comrades in the workroom, regarding the intimacy existing between a married couple. One of the girls having said to her one day, 'that the patroness did not love her husband and no longer had relations with him,' she felt much relieved from the painful thought which had been torturing her, and she took infinite joy in this item of information. She would have been glad if conjugal intercourse had never taken place and

would have gladly imagined this and persuaded herself of this belief had not a daughter, alas, been born of the marriage, thus proving beyond refute the existence of such relations.

"Her love was so violent that she was brought completely under the control of her beloved. She submitted in a docile manner to her least caprices, she obeyed her blindly whatever she might be ordered to do. 'This woman,' she told us, 'makes me do whatever she wishes. If she asked it of me, I would steal, I would undertake violence, I would commit suicide, on condition that she might be with me.'

"She had not dared to declare these sentiments to her patroness, but the silent sorrow of her love was poured out in stifled cries, in ardent letters laboriously written and never sent. This was the substance of them: 'Madame, I love you with an unspeakable love, I am capable of all madness to please you, etc. * * * *'

"Her modesty finally permitted one last confidence. She would have been gladly willing 'to go' with her if she (the patroness) had proposed this to her. She would have been glad to give her pleasure. Personally, however, she was content 'to contemplate.'

"In our opinion, Jeanne M. is a decided invert, a constitutional uranist; and her inversion is not purely platonic, erotomaniac in some way, that is to say, accompanied by a sexual anesthesia; but, on the contrary, frankly sexual and endowed with a taste for the voluptuous act. Not only does she feel herself attracted towards another woman, from whom she would wittingly accept voluptuous caresses, but she also entertains a vigorous repugnance to heterosexual relations. Men did not please her,, she said, and never had she consented to the intimacy of a man; intimacy she would gladly permit to a woman, even a woman other than her patroness.

"The passion described has not been, however, her only love affair. Jeanne M., before her patroness, had loved other women in the same manner; her last love is only, she assures us, the most ardent and engrossing. To be accurate, therefore, it is not a woman—an individual—whom she loves, but woman in general, her entire sex.

"Jeanne M., on the other hand, an anonist since the age of sixteen, is a virgin. She had never experienced, according to her statement, other than solitary practices; she had never submitted to relations with others. Her original timidity, her inherent modesty—the decrement of which even she herself had earnestly desired, had never been actually broken down, and it is this which explains the restraint of her senses, the apparent absence of physical desire, and the concept of an ideal love, mystic and exclusively theoretical. Had one experience thrown her into the arms of a lesbian, it is certain she would have enjoyed the voluptuousness of their embraces. The attraction of servitude to her patroness, the desire of obeying her meekly, the need of feeling dominated by her—all these appear to us as sexual charactristics of her love."

The authors comment that the subject of this case was evidently a simple invert.—*Maryland Medical Journal.*

Dyspareunia and Its Surgical Treatment.

Phillips notes that quite a number of women suffer more or less severe pain during coitus, that this condition underlies many a case of otherwise unaccountable neurosis, and that it nearly always depends on some pathological lesion which, if properly diagnosed and treated, can generally be cured. The cause may be an unruptured hymen, a hymenal fissure, kraurosis vulvæ, or vaginismus. Dyspareunia associated with vaginismus is by far the most difficult condition to relieve. The author has never been able to cure a case in which it has persisted for several years The treatment includes: (1) A cure of any obvious pathological condition. (2) Forcible and very thorough stretching of the genital passage under full anesthesia. (3) Lubricating and anesthetizing the vagina by glycerin and cocaine prior to coitus. Other causes of dyspareunia are a retroflexed uterus, a prolapsed ovary, an ovarian cyst, ovariosalpingitis, and parturition trauma —*Medical Record.*

Obstetric Hemorrhage.

Jung remarks in the course of this article that with placenta praevia extraction should never follow version immediately unless the os is completely dilated. Otherwise the cervix is liable to tear and this is extremely dangerous with placenta prævia. It nearly always entails severe hemorrhage, and it is almost impossible to suture the tissues. He says of cesarean section with placenta prævia that it must be reserved for institutions. In the home, constriction of the waist with a rubber tube, suspenders or rope, according to Momburg's technic, has often proved a life-saving measure both with placenta praevia and premature separation of the normally situated placenta.—*Journal of the American Medical Association.*

Editorial

PUBLISHER'S NOTICE—The Journal is published in monthly numbers of 48 pages at $1.00 a year, to be always paid in advance.

All bills for advertisements to be paid quarterly, after the first insertion of the quarter.

Business communications, remittances by mail, either by money order, draft, or registered letter, should be addressed to the Business manager, C. S. Briggs, M. D. corner Summer and Union Streets, Nashville, Tenn.

All communications for the Journal, books for review, exchanges, etc., should be addressed to the Editor.

AMERICAN MEDICAL ASSOCIATION.

The sixty-fifth annual meeting of the association was held at Atlantic City June 22-26, 1914, with an attendance of between four and five thousand. The meeting was characterized by smoothness and harmony and was in every respect a successful affair. Among other occurrences of note was the presentation of a gold medal to Surgeon-General Gorgas in recognition of his sanitary work as a factor in the successful building of the Panama Canal. The House of Delegates recommended that the requirement of one year of service as hospital interne should be compulsory after 1915, and that students entering upon medical education should be required to have had four years' high school course and at least one year of college education. The next place of meeting is San Francisco. In this connection it seems proper to say that the American Medical Association should have a permanent home. The strength of the body and the integrity of its transactions would be materially increased were a handsome monumental meeting place, say in the capital of our country, provided, where the annual meetings could be held. It would be a difficult task to eliminate politics from the affairs of the association, but could this be done and every member of the association be allowed to vote in conducting its affairs, the outlook of our national body would be brighter.

The following officers were elected: President, Dr. William L. Rodman, Philadelphia; Vice-Presidents, Drs. D. S. Fairchild,

Clinton, Iowa; Wisner R. Townsend, New York City; Alice Hamilton, Chicago, and Wm. Edgar Darnall, Atlantic City. Secretary and Treasurer, Drs. Alexander R. Craig and Wm. Allen Pusey, both of Chicago, reëlected.

American College of Surgeons.

This new association, membership in which is coveted by so many surgeons in the United States, met in Washington June 22.

A campaign was inaugurated at this meeting to establish a permanent home to be built in Washington, and more than $100,000 was subscribed. Membership was conferred upon eleven hundred surgeons. It was decided by the Board of Regents that after November, applicants for fellowship shall have performed at least seventy consecutive major operations and recorded all the details of each, and shall in addition have contributed something of distinct value to surgical knowledge. This requirement will certainly put a decided limit to conferring of fellowship in the future.

Book notices omitted from this number by press of matter.

The trustees of the American Medical Gold Medal Award respecfully announce that the medal for nineteen hundred and fourteen has been conferred upon Dr. George W. Crile, of Cleveland, Ohio, as the American physician who in their judgment has performed the most conspicuous and noteworthy service in the domain of medicine and surgery during the past qear.

Wm. J. Robinson,
Claude L. Wheeler,
H. Edwin Lewis,
Trustees.

The New Dress of the Annals of Surgery.

Owing to the continually increasing amount of material of value, offering for publication in the *Annals of Surgery*, the pub-

lishers have found it necessary, beginning with the July 1914 issue to enlarge the size of the page and also to somewhat reduce the size of type in which the original contributions have heretofore been printed. The enlarged size will also enable the publishers to make a better display of the illustrations which are such an important feature of the *Annals* contributions.

Thirty years ago, when the first number of the *Annals of Surgery* appeared, the size and style then showed suited admirably. At that time a single number contained only 96 pages. They have continued to increase each year until now the average number of pages to an issue is 164. Special issues have been published in which the number has been increased to over 300 pages, with the result that the manufacturing of the Journal in the former style is not entremely difficult but the finished product is unwieldly and can not be read with the ease and comfort which is due a subscriber. In fact, it required constant pressure on the pages to keep them open.

We believe the new form overcomes this inconvenience and enables the publishers to give the reader more material and greater comfort while reading than it could have been possible for them to present in the former size.

The July issue has a choice collection of important articles of exceptional value to the general practitioner as well as the surgeon. It is a splendid example of the way this publication continues to set the pace in surgery.

Publisher's Department

"Robinson's Lime Juice and Pepsin" is an excellent remedy in the gastric derangements particularly prevalent at this season. It is superior as a digestive agent to many other similar goods. (See advertisement in this issue.)

Glyco-Thymoline.

Mrs. M., age 40, had been suffering from piles for a long time and only occasionally obtained relief by using an ointment (probably Angt. Galla) which had been recommended to her. When called I found on examination three prominent growths, one on each side of the anus, the mucous surfaces being abraded and coated with a blood-tinged discharge, the other and larger one in front towards the perineum, and this partially strangulated by the sphincter. Pain was excessive and sitting impossible. I advised operation, but this being declined, directed a piece of flannel saturated with Tr. Opium one part to three parts of Glyco-Thymoline placed over the tumors and an ice bag against it, to be renewed every hour or two. The relief was more prompt than I expected and the nurse was able to give an enema to clear the lower bowel of hardened feces within ten hours after the applications were begun and the following day return the piles. I then directed a half pint to be used every morning as an injection, with the result that it has quite relieved the feeling of pain, fullness, heat and itching, and also cured her constipation.

NASHVILLE JOURNAL
—OF—
MEDICINE AND SURGERY

CHARLES S. BRIGGS, A. M., M. D., Editor

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Original Communications

THE TWENTY-THIRD ANNUAL REPORT OF SURGICAL OPERATIONS AT THE PRIVATE INFIRMARY OF DRS. CHAS. S. AND SAMUEL S. BRIGGS.

Reported by
W. T. BRIGGS, M.D., Nashville, Tenn.

(Continued from Last Month.)

Case No. LXVII. Recurrent Appendicitis. J. W. C., æt. 29 years, Henry County, Tenn., admitted March 7 suffering from recurrent appendicitis. The patient had suffered from a number of attacks at irregular intervals, the last of which about ten days before had been very severe. Marked tenderness over McBurney's point and some muscular rigidity over the appendicular region. Under A. C. E., March 8, the cavity was entered through the right semilunar line, the appendix delivered and removed and the stump buried with purse-string suture. The parietal wound was closed in the usual manner. The appendix was markedly thickened and was adherrent at several points. Recovery was uneventful.

Case No. LXVIII. Mrs. T. G. S., æt. 32, Nashville, Tenn. Admitted March 14. The patient was first seen after a severe flooding spell and gave a history of pregnancy with cramping pains lasting all day and into the night. She was extremely weak

from the loss of blood. The uterus and vagina were tamponned, and the patient, after a few hours rest, was moved to the Infirmary. After carefully preparation under A. C. E., the uterus was thoroughly curetted and a large quantity of placental tissue removed. The uterine cavity was treated with tinct. of iodine and lightly packed with gauze. The feature of the case was the extremely exsanguinated condition of the patient from which she very slowly recovered. Dismissed April 4.

Case No. LXX. Double Inguinal Hernia. J. S., æt. 28, Paris, Tenn. Admitted March 18. This patient presented a double inguinal hernia, that of the left side being very small. On account of his occupation, railroad blacksmith, a truss was troublesome. Under A. C. E. both herniæ were treated after the method of Bassini, using No. 1 twenty-day catgut for the closure. The wounds healed without any disturbance and the case was dismissed April 11.

Case No. LXXII. Ingrown Nail—Avulsion. J. H., æt. 16 years, city. Admitted March 19. This patient presented a greatly hypertrophied toe, which was greatly inflamed and tender. He had treated it by cutting away the nail until its edges became so buried by the overlapping tissue that he could no longer reach its margin. Novocaine was used locally and the tissues overlying the nail laterally were cut away and the nail was dissected from its bed. Rapid healing followed.

Case No. LXXV. Cervical Adeno-Sarcoma. A. J., æt. 28, Cottage Grove, Tenn. Admitted March 25. This patient presented a large tumor on the right side of the neck of quite recent growth, its axis lying in the line of the carotid artery and extending from the angle of the jaw to the clavicle. Under A. C. E. the neoplasm was exposed by an S-shaped incision. Great difficulty was experienced in enucleating the mass which surrounded and involved the internal jugular vein, a portion of which was resected. On account of its firm fascial attachments, a great deal of fascia was sacrificed. There was only slight breaking of the tumor at its lower end. The wound was carefully closed,

using a drain at the lower extremity of the wound. The local reaction was marked and the sutures yielded to the swelling at the lower part. Here the swelling persisted in a suspicious manner. The patient was dismissed apparently well April 11. Subsequent report shows that the growth recurred with extreme rapidity and death supervened thirty days after his return home.

Case No. LXXVI. Internal Hemorrhoids. H. C. J., æt. 42 years, Lebanon, Tenn. Admitted April 1 for treatment of internal hemorrhoids. Protusion of rectal masses after defecation, occasional severe rectal hemorrhages and general broken down condition. Anesthesia with A. C. E. The anus was freely dilated and the hemorrhoidal tumors exposed. These were four in number, each as large as a malaga grape. These tumors were ligated in halves after transfixion and excised. The patient made a rapid recovery and returned home in ten days.

Case No. LXXVII. Hypertrophied Tonsils. F. V., æt. 16 yrs., city. Admitted April 3. This patient presented both tonsils greatly enlarged. Novocain was injected around and into the tonsils and they were removed with a tonsillotome, leaving a thin layer of tonsillar tissue. The resulting soreness was less than usual and the patient was dismissed April 6.

Case No. LXXX. Carcinoma of Outer Canthus of Eye. M. B., æt. 20 years, Lebanon, Tenn. Admitted April 4. This patient presented a small ulcerating carcinoma involving both lids and the conjunctiva. Under A. C. E. anesthesia all diseased tissue was freely removed and the eyeball enucleated. The orbital cavity was cleaned out and some slight effort was made to remedy the defect by plastic work. The orbit was packed with gauze. The wound required frequent dressing but healed rapidly. The patient was dismissed April 25.

Case No. LXXXII. Incarcerated Femoral Hernia. Mrs. A. C. B., æt. 64, city. Admitted April 5. This patient presented a femoral hernia of the left side, irreducible and subject to frequent enlargement. She had fallen and hurt herself and tried to hide the fact, but the pain and vomiting soon brought a confes-

sion. Under A. C. E. the hernial sac was exposed by a vertical incision, dissected free and opened. Its contents, omentum and intestine, were freed from numerous old firm adhesions. The intestine was black but still retained its lustre. After enlarging the opening the gut and omentum were returned into the abdominal cavity and after ligating and removing the sac, the canal was obliterated by mattress sutures. The skin wound was closed with a continuous catgut suture. The very delicate patient did not bear the strain well, quickly assumed an asthenic condition, growing progressively weaker and died on the third day. There were no symptoms that could be attributed to the operation except slight shock.

Case No. XC. Uterine Fibroma—Abdominal Hysterectomy. Mrs. J. M. C., æt. 38, Springfield, Tenn. Admitted April 8. Recently this patient had had several hemorrhages which left her quite exsanguinated. After the usual preparatory treatment, under A. C. E. anesthesia the abdomen was opened in the mesial line. There was some difficulty in separating the bladder on account of the peculiar shape of the tumor. The usual steps of Kelley's method were reversed in that the cervix was divided from behind and the bladder separated from below upward. The ovarian and uterine arteries were secured with Pagenstecher's thread and the peritoneum closed over the stump of the cervix and broad ligaments with a continuous catgut suture. The abdominal wound was closed by the combined through and through and seriatim sutures. The patient made an uneventful recovery and was dismissed May 10.

Case No. XCIII. Stricture of the Urethra. E. S. S., æt. 48 years. Sweetwater, Tenn. Entered April 21 for treatment of urethral stricture. This patient had been operated on the previous season by external urethrotomy for impermeable stricture and returned for further observation and dilatation. The urethra allowed a fairly good stream but was dilated every other day with conical sounds until No. 18 American was easily passed, after which he was allowed to go home.

Case No. XCVII. Acute Appendicitis. Miss V. G., æt. 19, city. Admitted April 22. This patient was suffering intensely and was brought to the infirmary at 2 a. m. In addition to the usual symptoms of this affection there was a marked hyperesthesia of the lower extremities. Under A. C. E. an incision was made in the right linea semilunaris, the anterior layer of the rectus sheath divided, the muscle retracted toward the mesialline and the posterior layer of the sheath divided. The appendix was delivered through the wound. It was acutely inflamed and kinked on itself by bands. The mesoappendix was ligated with catgut, the appendix divided and the stump buried with a catgut purse-string. The hyperesthesia of the lower limbs continued for several days, causing the patient great discomfort. The wound healed kindly and the patient was dismissed May 10.

Case No. XCVIII. Fractured Thigh and Other Injuries. H. W., æt. 14, city. Admitted April 27. This boy, who was very delicate and suffering from a chronic bronchial affection of several years duration, had been run down by an automobile. As a result of the accident he sustained numerous injuries in addition to a very oblique fracture of the femur in its upper third. His mental condition pointed to a complicating injury to the brain, but there were no localizing symptoms, simply an irrationality which at times changed into well marked dirilium. After several weeks the mental condition gradually improved and at present his mind is clear. The fractured extremity was encased in a plaster of Paris bandage which extended from the foot to the axilla. For additional support and in order to make the handling of the patient as easy as possible, a box frame, consisting of two lateral splints extending from the axillae to and beyond the feet and joined at their lower extremities, was also used. However, on account of the injuries over the iliac crests, the sacrum and the lumbar spines, the dressing was not satisfactory and was removed after the second week. The plaster was applied from the ankle to the pelvis and the limb steadied with sandbags. The patient's condition was extreme for six weeks, since then, however, there has been slow improvement, but at the present writing

there is no sign of union at the fracture and his vitality is still at a very low ebb. On account of the patient's general condition, operative interference has been deferred.

Case No. CX. Ulcer Over Right Elbow. Mrs. P. T. C., æt. 32 years, Robertson County, Tenn. Admitted May 5 for treatment of extensive ulcer on external aspect of right elbow, the result of a caustic paste applied for supposed cancer. The ulcer was irregular in its outlines, presented indurated edges and its base was covered with unhealthy granulations. Treatment consisted of free excision of its edges curetting the entire surface of the base of the ulcer and division of all bridges of tissue spanning the ulcer. The parts healed satisfactory and rapidly, removing all suspicion of malignancy so that the patient was enabled to return home with a good arm instead of having amputation done for cancer.

Case No. CXV. An Unusual Infection. W. B. G., æt. 58, city. Admitted May 5. The patient had been on a spree and gave a history of having had a marked swelling in both parotid regions. This swelling had subsided when he was admitted to the infirmary on account of extreme pain in the right shoulder. Soon after entrance he developed a mild mania a potu, which persisted for a week. A marked swelling, which was extremely tender appeared over the right sternoclavicular articulation followed by pain about the acromion process and about the brachial plexus in the neck. This condition resisted all forms of treatment and still continues, but with less intensity.

Case No. CXIX. Internal Hemorrhoids. Mrs. T. A. H., æt. 43 years, from near Lebanon, Tenn. Entered May 6 for treatment of internal hemorrhoids of several years duration. The usual symptoms were present. Under A. C. E. the anus was thoroughly divulsed and three large hemorrhoidal masses ligated in halves and excised. Recovery was satisfactory and the patient was dismissed May 16.

Case No. CXX. Warty Growth of Eyelid. A. T. P., æt. 12 years, Paris, Tenn. Admitted May 9. There was a peculiar pedunculated growth of the lower eyelid which had been removed

some time previously but had recurred. Under A. C. E. the neoplasm was encircled by elliptical incisions and dissected out. The wound was closed with interrupted horse hair sutures. The sutures were removed on the fourth day with healing complete.

Case No. CXXIV. Chronic Appendicitis. H. S., æt. 26, resident of the city. Admitted May 12. This patient was just recovering from an unusually severe attack of which he had had quite a number. Under A. C. E. the cavity was opened by an incision through the sheath of the right rectus muscle and the large inflamed appendix freed from numerous adhesions was delivered and removed. The appendical stump was buried in the usual manner by a catgut purse string suture and the parietal wound closed as described in preceding cases. Recovery was uneventful and the patient was dismissed May 27.

Case No. CXXVII. Strangulated Femoral Hernia. J. H., æt. 64 years, Nashville, Tenn. Admitted May 14. The patient while at work in stooping felt the hernia slip from beneath his truss. He neglected to reduce it at the time and when he did try, found it impossible to do so. All efforts at taxis failed and he was taken to the Infirmary for operation. Under A. C. E. a free vertical incision was made over the swelling and the hernia exposed. The sac was opened and found to contain intestine and omentum, the latter closely adherent to the sac. The gut was dark in color, but after dividing the constriction at the neck of the sac, it rapidly regained its color and was replaced. The sac was tied off at its neck and the canal was closed by two mattress sutures of catgut. The external wound was closed with continuous catgut suture. Healing took place by first intention and the patient was dismissed June 4.

Case No. CXXIV. Vaginal Hysterectomy. Mrs. A. T. R., æt. 44 yrs., Hartsville, Tenn., admitted May 15. The patient had sustained a number of excessive hemorrhages from the uterus which had reduced her strength considerably. Vaginal discharge was profuse and very fetid. Examination disclosed carcinomatous infiltration of the body of the uterus. Under A. C. E. the womb was removed per vaginam employing ligature hemostasis. The

appendages were not removed. The stumps of the broad ligaments were sutured to each other and a small drain carried into the pelvis. Rapid recovery followed and the patient was dismissed June 9.

Case No. CXXXI. Tonsillotomy. M. G., æt. 12 years, city. Admitted May 18. The tonsils had been operated on some years previously but had again inflamed and become enlarged. After local anesthesia with novocain, both tonsils were removed with the guillotine, leaving only a slight amount of tonsillar tissue. Good recovery followed.

Case No. CXXXIII. Chronic Appendicitis. P. E., æt. 23 yrs., Wilson County, Tenn. Admitted May 20. There was marked tenderness over McBurney's point, but no history of distinct attacks. Under A. C. E. the cavity was opened through the sheath of the right rectus muscle and the appendix readily delivered. It was inflamed and thickened. The meso was ligated with catgut and the appendical stump was buried with catgut purse-string suture. The parietal wound was closed as described in preceding cases.

Case No. CXXXVIII. Administration of Salvarsan. H. E., æt. 36 yrs., city. Admitted May 25. This patient presented marked rupial eruption of syphilitic origin in spite of the fact that he had received two intramuscular injections of 606. Intravenous administration was carried out selecting the median vein through which the solution was slowly introduced. There was practically no reaction and the patient was dismissed the following day. The eruption cleared up rapidly and the patient has since remained free.

Case No. CXXXIX. Tonsillotomy. W. M., æt. 9 years, city. Admitted May 28. Novocain was injected but escaped through the many crypts and was then injected into the surrounding tissues. The tonsils broke down under the forceps so that it was necessary to clear out the tonsillar spaces with the curette. A good result was obtained.

Case No. CXL. Perineorrhaphy and Trachelorrhaphy. Mrs. M. L. F., æt. 29 years, Pittsburg, Pa. Admitted June 12. The patient gave a history of pelvic inflammation and presented a lacerated cervix and a partial laceration of the perineum. She preferred delaying the abdominal operation for a time. Under A. C. E. the cervix was pared and closed with catgut. The perineum was repaired after the method of Emmett. The sutures were removed on the 10th day and the patient was dismissed July 1.

Case No. CXLII. Fistula in Ano. W. M. B., æt. 35 years, Livingston, Tenn. Admitted July 10 with fistula in ano of long standing. Examination showed two external orifices through one of which the probe passed readily into the rectum. Under A. C. E. the fistulous tract was divided upon a grooved director and the shorter tract opened into this wound. The parts were thoroughly curetted and a packing of gauze inserted. The wounds healed rapidly and the patient returned home in ten days.

Case No. CXLIII. Acute Appendicitis. B. S., æt. 29 years, Henry County, Tenn. Entered July 12 in the midst of an attack of acute appendicitis of four days duration. Under A. C. E. the cavity was opened by the usual incision. The search for the appendix showed a mass behind the caecum. After carefully walling off with gauze the caecum was lifted, causing a rupture of the abscess in the cavity of which the appendix could be felt. It was thought safer to leave it in situ. A large enterolith was discharged with the pus, proving a perforation. A rubber drainage tube was carried to the bottom of the abscess cavity. The wound was closed around the drain. The tube was removed on the fourth day and the sutures on the seventh day. The wound closed rapidly and the patient was able to go home on July 31.

Case No. CXLIX. Perineorrhaphy. Mrs. C. H., æt. 24 years, Birmingham, Ala. Admitted July 12. This patient had been operated on some time previously and it had been found necessary to remove the sutures in order to reach and control a severe recurrent hemorrhage as described on a foregoing page. Under A. C. E. the cicatricial tissue was pared away freely and the re-

pair accomplished according to the method of Emmett. The sutures were removed on the tenth day and the result found satisfactory.

Case No. CL. Suppurative Appendicitis. C. T., æt 12 years, Hartsville, Tenn. Admitted July 26. This patient had been taken violently ill two days before and had been brought through in an automobile. Under chloroform the cavity was opened through the usual incision and the appendix found behind the caecum. The intestines showed intense inflammation and the appendix was gangrenous in its distal half and this part contained a large enterolith. A considerable quantity of four-smelling, but thin pus was discharged, but no adhesions had formed. The appendix was removed and the stump treated as usual. The parietal wound was closed as previously described. The bowels moved voluntarily on the following day and the patients condition was satisfactory except for his fretfulness. On the third day the pulse and temperature rose rapidly, the wound was freely opened and some offensive fluid escaped but the cavity showed no infection. A drain was introduced and the cavity irrigated but the patient sank rapidly and died July 31.

Case No. CLII. Trephining for Fracture of the Skull. C. E. J., æt. 12 years, Una, Tenn. Admitted July 27. The patient had fallen from a horse upon the hard pike, receiving the brunt of the fall upon the left side of his head. He recovered quickly from unconsciousness but was dazed and showed some signs of cerebral compression. No scalp wound was found but there was marked swelling at the site of the injury. Under chloroform the day of entrance the skull was exposed by a free horseshoe-shaped incision and a depression disclosed at the anterior parietal region, a fissured fracture extending for some distance backward from the depressed portion. A one-inch trephine was applied and the depressed bone removed. With the gouge forceps, the crack was followed to its end, removing portions of the internal table of the skull. The wound was closed with interrupted silkworm gut sutures. The patient made a good recovery and returned home in three weeks.

Case No. CLIV.— Acute Appendicitis. C. J., æt. 27 years, Paris, Tenn. Admitted July 27. This was a very acute case of four days duration. Under A. C. E. anesthesia, the cavity was opened through the usual incision in the right linea semilunaris. The appendix was held firmly by adhesions which made the delivery difficult. The appendix was unusually large and contained several enteroliths. After securing the meso the appendix was removed and the stump inverted by the purse-string suture. The abdominal wound was closed in the customary manner. Dismissed August 8.

Selected Articles

TUBERCULOSIS AND PREGNANCY.*

By L. M. Allen, M.D., Winchester, Va.

A sort of traditional view still exists in the minds of the layman and even some medical men that pregnancy has a beneficial effect upon consumption and sometimes may even arrest its development. In looking over the literature it is noticed that only a comparatively few text-books deal with this subject to any extent and even these seem to pass by it lightly, as if it were a matter of very little importance; for example, one of the most complete considerations I have been able to find in any of the text-books occupies only a space of about three pages, and the same author devotes sixteen pages to the consideration of the various forms of destructive instruments, many of which, at the present time, are obsolete. To one who has had a fair amount of experience with such cases, it is difficult to understand how such a serious condition can be passed by so briefly.

My idea in presenting this paper is to bring this subject more prominently before the general practitioner and, by adding a little to the already accumulating evidence, point out the fact that, as a rule, the gravid condition exerts a decidedly harmful effect upon tuberculosis when already present, and may probably act as a predisposing cause in those women who are looked upon as receptive candidates. According to Lancereaux, statistics appear to show that a considerable number of cases of tuberculosis develop solely as a result of pregnancy. The morbific action of the bacillus is not discredited by this statement, which simply means that a certain number of women have become tuberculosis who had no family history of the disease, were not of the scrofulous

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or tuberculosis habit, had never been exposed to the risk of infection, and were living at the time of the infection in a good sanitary environment.

Assuming, as everyone does, that the bacillus is omni-present, he concludes that pregnancy alone can render a healthy individual tuberculizable. If pregnancy can thus affect the healthy, how mnch more likely it would be for the disease to assert itself in a woman who is a fit subject for the disease or in one who is actually consumptive. The real explanation of the fatality through which pregnancy and parturition lead to phthisis is not entirely understood, but most probably is the result of *lowered resisting* power. The severe strain to which pregnancy subjects a woman is not so noticeable in the strong, healthy individual, but a woman who is frail and weak is apt to be made weaker, and especially is this true where the pregnancies occur in rapid succession. When there is added to all this the labor, with its shock and fatigue, followed often by loss of large quantitiess of blood, the story is told. If we could stop here even, the result might not be so disastrous, but following come the months of nursing with the tremendous drain on the system, and, in addition, among the poorer classes, the entire care of the child or children as the case may be.

There seem to be a few cases on record where tuberculosis was already present when conception took place, in which the pregnancy has *apparently* exerted a beneficial effect upon the disease. But it is most probable that the effect has been *apparent* rather than real. As a rule, signs of phthisis are first noticeable about the fifth month of pregnancy when development of the fetus begins to act as a drain on the maternal system. The first pregnancy and confinement may not have any apparent result, but the second and, still more likely, the third, especially if they occur in rapid succession, are likely to prove serious. In reference to this phase of the subject, Dubois makes the following statement: If a woman threatened with phthisis marries, she may bear one accouchement well, the second with difficulty, and a third, never. There may be exceptions to this rule, but generally speaking it is true. My own experience in these cases leads me to believe that

the most rapid cases of tuberculosis are those following confinement. I recall three of these in which death occurred on the sixteenth day, the fifth week, and the end of the second month respectively. In two of these the diagnosis was confirmed by autopsy, one being acute tuberculosis pneumonia, and the other general miliary tuberculosis. Such cases are frequently mistaken for typhoid fever and puerperal sepsis. A diagnosis of both these conditions had been made in the above cases.

The views of some of those who have made tuberculosis a special study may help to confirm what has already been said. Lawason Brown (Osler's Modern Medicine) makes the following statement:

The effects of pregnancy and partuition upon pulmonary tuberculosis are to be separated; pregnancy may awaken old quiescent lesions and incite new ones to renewed activity. In advanced cases pregnancy is always serious, and when laryngeal lesions are present the mortality may reach 61 per cent. The effect of partuition, although it lasts but five or six hours, is always to be regarded seriously. Bonney (Text-book on Pulmonary Tuberculosis and Its Complications) says that nearly all clinicians agree that the combined effect of pregnancy, the puerperium and lactation, constitute a tremendous tax upon the physical energies of the consumptive and directly lower the powers of resistance. In view of the clinical observation as to the increased activity of the tuberculous process after childbirth with a progressive subsequent decline, pregnancy has become generally to be regarded as a factor of grave prognostic importance among such patients. Instances of actual improvement in the condition of tuberculous lungs as a result of concurring pregnancy rarely have been recorded. It is but natural, therefore, that pulmonary invalids should have been instructed as to the advisability of marriage, the imperative avoidance of conception, and even the expediency of a speedy termination of pregnancy.

Some of the cases which have been under my care from time to time seem applicable to the subject, and a brief report of these may prove interesting.

Mrs. S., aged twenty-six years; pregnant third time. The first pregnancy was terminated about the fifth month by accident; the second reached full term, and the third was interrupted at the thirty-eighth week on account of her condition, which will be explained later.

History of the case was as follows: During the fourth or fifth month the patient had contracted cold and began to cough, which continued to get gradually worse; during all this time she had been under the care of a physician who had given her a great deal of medicine and repeatedly told her family that it was only a simple cough that would get well as soon as the confinement was over.

She was placed under my care to be attended in her coming confinement, not because of any anxiety concerning her condition. When seen, pulse was ranging between 110 and 120, morning temperature 100, general appearance of the patient bad. Examination of the chest showed an advanced lesion in the upper two-thirds of left lung and upper one-third of right. Patient was advised to have pregnancy terminated immediately on account of her condition, which was explained to herself and family, child being viable at this time. After a family conference, during which time patient's condition continued to grow worse, at the end of a week consent was given. Pregnancy was terminated by conservative measures, labor lasting twelve hours, terminating in spontaneous birth, but was followed by very severe hemorrhage, which is not unusual in these cases. Patient continued with fever and elevated pulse, but gradually became convalescent from her accouchment, and in two weeks was placed on a cot and sent to the country where she was put under the usual treatment for tuberculous patients. Two years after this the patient had practically recovered. There were still evidences in the left lung of her condition, but she had so far improved that she was considered as being out of danger if she continued the proper methods of living. So far as I can find out this woman had always been healthy, came from healthy family, and had been living under fairly good surroundings, although in the midst of a large city.

Case two differs from the above in that she had a bad family history, but had been healthy until after marriage. Her mother died of tuberculosis after fifth confinement, and her sister five weeks after her first. This woman had had two children, having been attended by me in each. During the first she did well, but that the pregnancy had been a drain on her vitality was manifested by the fact that she was unable to nurse the child longer than two months. During the second pregnancy she developed a cough, but no lesion of the lung could be recognized. Notwithstanding this fact, she became so weak and run down that I interrupted the pregnancy at the thirty-eighth week. Following this, she was unable to nurse the child at all and was a long time regaining her strength, although she had an easy labor and normal puerperium. In October I was called to see her for severe pain in the chest; examination revealed no definite rales, but a suspicious roughness in the left apex, pulse ranging from 90 to 100, temperature normal and a return of the old cough. She was then pregnant four and one-half to five months. A note made at the time stated that "I feel certain that this woman has tuberculosis and only a short time will elapse before it will be recognizable." In the latter part of November, her condition became so serious that the pregnancy was terminated. The child died a few hours after birth on account of prematurity. The woman as usual had a very slow convalescence, and was advised against further conception.

Case three—Mrs. C., was seen in consultation with Dr. Dixon; pregnancy about thirty weeks advanced. Apices of both lungs involved; evening temperature 99½ to 100, pulse 90 to 100, weak and losing ground, although she had been under treatment for some time. After several days observation of this woman, seeing that she was going down rapidly, the immediate termination of pregnancy was advised and accepted. Labor was induced on February 4, 1907. Pains began on the evening of the fifth and labor was terminated spontaneously on the morning of the sixth. The child was alive, but on account of prematurity died in a few hours. Patient was sent to Blue Ridge Summit and when last

heard from was doing well, and I might add that at the present time she is looked upon as cured.

Case four came to me for treatment October 1, 1908, giving the following history: Mother died of heart disease; father of asthma; most probably tuberculosis; no brothers or sisters; has three children, six, four and two years old, respectively. At that time was five and one-half to six months pregnant. Has had a cough for months; had been losing weight and was very weak. Examination of chest showed both lungs in bad condition. Advised that pregnancy be terminated, but on account of her religion the advice was refused. Seen again November 12; rapid progress of disease was apparent, patient having been in bed several days on account of weakness; pulse rapid and weak; temperature 103; says the fever rises very high every evening. Still refuses to have pregnancy terminated. My advice not being accepted, I declined to have anything further to do with the case, but found out later she was confined on December 1. She died on the third day, and the baby during the first week. A number of other such cases could be cited, but on account of lack of time will be omitted.

While the title of this paper is "Pregnancy and Tuberculosis," I do not feel that the subject would be complete without some reference to the off-spring of the tuberculous parents. In taking up this subject we must consider the possibility of the transmission of the bacteria through the placenta. In a large number of tuberculous women who are confined each year, Hauser was able to collect only eighteen who have given birth to children in whom the placenta gave evidence of the disease. Birch, Hirschfeld, Schnorl, Lehmann and others have described the tuberculosis of the fetal portion of the placenta, and occasionally cases of congenital tuberculosis.

In Nothnagel's Encyclopedia of Practical Medicine, the author quotes from the most reliable pathologists, including Virchow, whose experience extended over decades and who never saw a genuine case of congenital tuberculosis; and such a case is designated as a rarity which has only occurred in conjunction with uterine tuberculosis in the mother. He continues with the asser-

tion that if we consider the two questions, first, whether placental transmission is possible; and second, whether it occurs so frequently as to constitute the principal cause of dissemination in tuberculosis, we must answer the former unconditionally in the affirmative, the latter absolutely in the negative. Further argument against the frequency of placental transmission of tubercular bacilli is offered by the pathological findings as presented by the same author. Thus, according to the law of localization, we see the first and most advanced changes at the place where tubercle bacilli enter the organism, that is, in the nearest lymph glands; accordingly, in intra-uterine transsmission, the liver, being the inlet for the blood, infected by the maternal circulation, should show the first and most important changes. As a matter of fact it has been found that in all incontestable congenital cases, the liver and abnominal viscera are principally involved, whereas, in the preponderating majority of tuberculous children, it is not the liver, but, just as in adults, the lungs and the bronchial glands which are chiefly affected. According to Biedert's compilation, in 1,346 bodies of tuberculosis children, the organs were affected in the following order: the lungs in 79.6; intestines, 31.6; the lymph glands, 88 per cent and the peritoneum in 18.3.

Concerning the effect upon the child at birth, a study of the literature reveals rather conflicting statements. Thus, in one textbook the statement is made that the children of tuberculous mothers are usually well developed; while in another, which is equally well known, it is stated that the off-spring of these women are usually delicate and undersized, and after developing the strumous diathesis have a tendency to fall a prey to the disease. My own experience is that they are about like those of the average.

Leaving aside the condition of the child at birth, we will review briefly the effect of disease upon its early life. The researches of Von Behring and Calmette are gradually turning the trend of modern thought toward the interpretation of the term predisposition, as a susceptibility of the patients dependent upon antecedent infection; and this is further strengthened by Cornell who states that the extent to which hereditary disposition is responsible for development of the disease can never be determined until the effect of infection is completely eliminated.

It is a gradually growing belief among tuberculosis specialists of the present day, that children born of the tuberculous parents have established a certain amount of immunity from the disease; and, provided they be removed immediately after birth from the source of infection and placed under the best conditions for growth and development, will probably be no more liable in future to disease than others. This, however, is still to be proven, and while I personally believe that as a result of close contact of child and parent, infection in early life is the most important factor in the cause of tuberculosis appearing in later life, still in the light of our present knowledge, we are forced to believe that a child of tubercular parents comes into the world with a disposition for the disease.

Management of such cases: If a woman has a bad family history, and is delicate, she should hesitate before entering into marriage. If she is already tuberculous, marriage should be legally prohibited; if she becomes tuberculous after marriage, she should be warned against the occurrence of conception. If conception does occur, she should be watched very carefully, and in the presence of decided activity of the disease, the pregnancy should be terminated as once, as carefully and conservatively as possible, and the woman put under the most favorable conditions for health. If pregnancy should continue to full term, the mother should not be allowed to nurse the child, nor should she take any part in caring for it, as it is undoubtedly these two drains on the maternal system that oft-times cause the fatal termination; and I may add that in the interest of the child, it should be removed entirely from the mother's surroundings. Personally, I disagree with those who, for the sake of the off-spring, would allow the pregnancy to continue while an active lesion is present in the lung. I would not hesitate to interrupt a pregnancy at any time after the disease was definitely proven, and in the presence of marked activity.

Recently, in a conversation with a lady who has been a patient of Dr. Trudeau at Saranac Lake, she remarked that one of the most pathetic features of the sanitarium was the number of women who are under treatment and are grieving for their young

babies at home. That simple statement is very significant and suggests the truth of what has been said. In the case of the woman who has had tuberculosis and recovers completely, I will quote from the advice given one of my patients by Dr. Trudeau: she might be allowed to marry after three years of good health,, but must be watched carefully. As long as good health is retained she may be allowed to give birth every three years.

Conclusions: A woman, because of lowered resisting power, the result of pregnancy and confinement, especially if these be repeated in rapid succession, may be more susceptible to tuberculous infection, even though she has a good family history. If she has the disposition, the disease is more apt to come on in pregnancy or after confinement than at other times; if she already has the disease, although it may be only in mild form, it will be aggravated by pregnancy and labor. Marriage should be discouraged in those who are tuberculous, but if this advice is not followed and pregnancy ensues, it should be interrupted at any time in the presence of marked activity of the disease. If pregnancy continues to full term under such conditions, it will be an advantage to both mother and child for it to be removed from its mother's surroundings and kept away continuously until she is cured.—*The Virginia Medical Semi-Monthly.*

THE SURGICAL DISORDERS OF DIGESTION.

By W. D. Haines, M.D., Cincinnati.

The surgical disorders of digestion may be grouped under four heads—

Chronic appendicitis.

Ulcer.

Cholecystitis.

Pancreatitis.

The entire group has many symptoms in common which present, in some instances, difficulties in differentiation which have baffled the most adroit clinicians. Perforation by stomach or duo-

denal ulcer may closely simulate acute appendicitis by the chill, pain, vomiting and rapid pulse induced by stomach or bowel contents flowing over the right kidney sulcus and head of the cecum on its way to the pelvis, and ulcer, in turn, has been mistaken for cholecystitis and disease of the pancreas.

Much confusion in diagnosis is due to the intimate functional relation of this group of organs, that is to say, when one member of this important family is pathologically insulted the other three cry out in physiological indignation.

A rather frequent source of error lies in our studious effort to regard the flamboyant symptom, vomiting, as the particular characteristic of disease of any individual member of this group, whereas, vomiting may be present with almost any disease or in the entire absence of pathological lesion. A third source of error is found in attempts to dissociate the groups pathologically; as indicated in a preceding remark, interdependence, team work, is an essential to full function, so when one of the group is the seat of pathology the other members of the group are prone to exhibit very constantly functional disorders, and occasionally demonstrable pathological lesions are found in two or more of the group at time of operation.

Thus, cholecystitis complicated by pancreatitis has been observed all too frequently to be explained on the basis of coincidence, and the influence of chronic gastric ulcer upon the other organs of this group as well as the general economy is too well known to require more than mention.

The X-ray has rendered valuable aid in the differential diagnosis of stomach lesions, and the future is bright with promise of more assistance from this fruitful, when correctly interpreted, source of information.

Efficient surgery has wellnigh eliminated appendicitis as a factor in disorders of digestion by early operation. Deaver said twenty years ago, "The time to operate for appendicitis is when the diagnosis is made." This assertion was a joke then; it is practice now!

Cholecystitis and ulcer are slowly but surely falling under the mastery of the clinicians; but the fourth in the group, pancreati-

tis, has, perhaps in consequence of neglect, proved very troublesome in its recognition and management.

The physiologist has told us much more concerning the pancreas than has the pathologist. The latter has been at much disadvantage in making his observations owing to the rapidity with which post-mortem changes take place in the pancreas, and while the physiologist has done much work in giving the organ a definite place in the scheme of digestion and fixing the role which each enzyme plays, the pathologist until quite recently was contented in finding an occasional cyst, malignant tumor or abscess in the course of his examination.

We are indebted to Opie, not alone for a rational explanation of how the pancreas becomes infected, but also for sharply calling the attention of the profession to the importance of pancreatitis as a factor in disorders of digestion. He taught that a stone which has become lodged in the common duct on the duodenal side of the ampulla of Vater would, owing to the greater force of the muscularis of the gall-bladder, cause a flow of bile directly into the duct of Wirsung, which in time would be absorbed and produce certain clinical manifestations. The mere fact that a stone was present in the duct would imply that infected bile was being forced into the pancreatic duct, and the pathological processes which followed were those of infection plus regional modification. Opie observed a number of cases clinically, and was fortunate in posting some of his cases and verifying his theory. Deforming adhesions or swelling of the head of the pancreas may also act as mechanical factors in the production of faulty drainage; the former by producing a kink in the common duct, the latter by direct pressure of glandular tissue upon the duct as it passes through the head of the pancreas, this anatomical arrangement being present in more than one-half of all human beings.

One other source of infection, the lymphatic, has recently received attention at the hands of Deaver and others.

Whatever the mode of invasion, the symptoms and influence of the disease upon (a) the digestive process, (b) the general economy, how can we get relief for our patients is what most

concerns us as clinicians in the management of chronic pancreatitis.

Rarely, indeed, do we meet with pancreatitis pure and simple. It is, perhaps, always secondary to some other infective process: suppurating retro-peritoneal lymph nodes, or other general infection, but more especially has pancreatitis been found associated with gall-bladder infections. Reasoning along this line it becomes imperative that we seek for symptoms of the forerunner, rather than for symptoms of pertaining directly to the organ in cases of suspected chronic pancreatitis.

To illustrate, we will take a case of dyspepsia wherein the patient has eliminated many of the usual articles of diet, notably those foods rich in starches and fats, has white or fatty stools, is losing weight and has a great antipathy for work. A carefully written history will in all probability reveal that the patient prior to his present illness has had a pneumonia, typhoid or other infectious process which was accompanied or followed by some degree of jaundice. We note the duration and intensity of jaundice, together with the presence or absence of colic, as these signs are of great value in the final summing up of the case.

Acute colic and an intense jaundice of short duration indicate impacted stone in the common duct, while long-standing jaundice of mild degree will point to cirrhosis of the liver or chronic pancreatitis; in the former, enlargement of the liver and evidence of portal stasis will serve to assist in establishing the diagnosis. Here, chemistry should, but unfortunately does not, come to our rescue in clinching the diagnosis. In exceptional cases wherein the patient is much emaciated or has flaccid abdominal muscles, we may palpate the thickened head of the pancreas, but in the main we must not rely upon this sign in the diagnosis, as tumor of the pylorus or an enlarged gall-bladder will be felt by the examiner one hundred times for every time he is fortunate enough to palpate the head of the pancreas. Cases of long standing may show a glycosuria in consequence of the irritation produced by increased pressure upon the islands of Langerhans. Elucidation of the above sketch may assist you in arriving at a presumptive diagnosis of chronic pancreatitis by exclusion, and if on opening

the abdomen the pancreas is found enlarged the diagnosis is complete.

In the year 1908 I read a paper before the Surgical Section of the Ohio State Medical Association in which drainage of the gall-bladder, in conjunction with operation for gastric ulcer, was recommended. Dr. S. H. Smith and I had adopted this procedure in a number of ulcer cases, and the results were very gratifying in that the patients seemingly recovered from the effects of their chronic illness more rapidly and returned to their homes and resumed work earlier than cases that were not drained. The practice was founded upon the thought that the entire group was more or less functionally awry in chronic gastric ulcer cases and our results encouraged us to continue, but we have learned by experience that the cases wherein the head of the pancreas is thickened or nodular are the cases which make such wonderful changes in a short time after draining the gall-bladder in conjunction with gastro-jejunostomy or other operative procedure for the relief of ulcer.

In dealing with chronic pancreatitis surgically, efficient drainage is the key to the situation. Those cases having large amounts of figrous tissue, in consequence of long standing irritation from an inflammatory process, are the least promising cases we meet because much of the glandular tissue has been destroyed by pressure.

In some instances the pressure has been sufficient to produce small necrotic areas in the gland which will require special care in their management. Owing to the deeply seated position and numerous vessels which surround the cephalic extremity of the gland, operation for exposing the pancreas is both difficult and dangerous. In the absence of confusing adhesions the gland will be most readily and safely exposed by an incision through the omentum above the lesser curvative of the stomach.

For draining the duct of Wirsung, removal of the impacted stone or adhesions and fixing a draining tube in the gall-bladder will suffice in the great majority of the cases; however, an occasional case will require some type of gall-bladder-intestinal tract anastomosis, but as these are details which must not infrequently

be decided at the operating table, I shall not burden you with them.

In presenting this paper to your society I do so in the hope that I may call your attention to a much-neglected subject, and receive some enlightenment from the discussion which my efforts may elicit.—*The Lancet-Clinic.*

Extracts from Home and Foreign Journals.

SURGICAL

Catgut.

When you see your surgeons putting all their strength against a strand of catgut in an attempt to tie tightly, and then hear them quarrel at the hospital because the gut breaks, just remind them that the best surgical advice is that more sloughs and more stitch abscesses are made by cutting off the blood supply in the tight tieing of sutures than in any other way. They know that the best surgical experience teaches deftness in the gentle approximation of the lips of the wound, rather than tight tieing and "puckering" of the line of suture. Catgut was never intended to test the surgeon's strength and the test of the virtue of catgut is not one of mere tensile strength.—*The Medical Herald.*

Is There a Causal Relationship Between Tonsillitis and Appendicitis.

Thalman, in Deutsche Militärärztli. Zeitschrift, 1914, Hft. 6 finds among forty-two extirpated appendices, of which thirty-two were affected with acute and ten with chronic inflammation, only one which showed hemolytic streptococci. In all the others intestinal bacteria were found chiefly, such as colon, intestinal streptococci and anærobic bacteria. In acute follicular tonsillitis there are found pyogenic (hemolytic) streptococci in large numbers, also fuciform bacilli, spirochetes and streptococci from the mouth.

The bacteriological examination of the author shows that tonsillitis is not a marked etiological factor in the production of appendicitis.—*The Lancet-Clinic.*

Transfixation Method of Treatment of Fractured Femur in Children.

Dr. John J. Moorehead read this paper before Section of Pediatrics, New York Academy of Medicine (Medical Record). He pointed out the limitations of the operative method and of the various extension methods of treating fractures of the femur. He allowed that the various suspension methods might be used with advantage in children under three years of age, but after that they were not likely to be entirely satisfactory. Dr. Moorhead's paper was based on a series of eight cases in children ranging in age from five to fifteen years. In nearly all of these children there was no shortening of the extremity, and in many there was lengthening. The first operation of this kind was done with a carpenter's bit augur. He then devised a steel drill with a detachable cutting point. It was made on three-sixteenths-inch nickel steel. The child was anesthetized and a location in the distal portion of the fractured bone was chosen for the transfixation. The field of operation was painted with iodine and the drill was introduced into the soft tissues, the bone, the soft tissues again until the skin on the opposite side was reached. The drill must not enter the medullary canal, the epiphyseal line, or the joint. The cutting point was then detached and a simple apparatus was attached to either end of the drill, to which, in turn, the cords and weights were fastened. This procedure was applicable to fractures of the tibia, the humerus, and the femur, but seemed particularly adapted to the latter. In fractures of the legs as much as 32 pounds could be applied. This method was especially adapted to cases in which other methods had failed, to overlapping fractures comminuted fractures, old fractures of the condyle, etc. It was preferable to plating because it was a much simpler and a less extensive operation, did not necessitate a secondary operation, as plating frequently did, required that the patient be under anesthesia only fifteen minutes, was not painful during convalescence, did not interfere to any great extent with the comfort of the patient, made nursing a much simpler matter and gave better results in respect to function and deformity.—*Pediatrics.*

Recurrent Luxation of Patella.

In the treatment of recurrent luxation of the patella, confinement to bed and the application of splints are held by Greig to be unnecessary. He believes there is no actual surgical interferrence which will improve the condition unless such an obvious abnormality as knock-knee demands rectification. As long as violent games are avoided, he says, the recurrence of the dislocation may be prevented by the application of a firm and well-fitting leather knee-cap. The ordinary elastic knee-cap is neither adequate nor desirable, for its tightness is apt to bring about by pressure an atrophy of the underlying soft parts and interference with the circulation in the cutaneous veins. A soft leather knee-cap lacing up the side and with a hole for the patella is the cheapest in the long run and quite efficient.—*The Jour. of the Am. Med. Assn.*

Paravertebral Conduction Anesthesia.

Siegel, an assistant of Krönig, after duly recognizing the work of Crile in nerve block (the Germans are all too slow in this respect, believing that Crile uses the simple conduction technique) gives his results with paravertebral anesthesia in gynecology. The method resembles that of parasacral anesthesia applied to the lumbar vertebrae, each spinal nerve being anesthesized just as it leaves the foramen. The author employed it in 170 cases and in 70 per cent of these no inhalation narcosis was superadded. Of the 170 cases 20 were obstetrical, the rest gynecological. The term paravertebral does not exclude parasacral, for the sacral nerves were also anesthetized, either *per se* or in combination with the lumbar nerves. The "twilight sleep" so freely practiced in Krönig's clinic was employed to exclude the psychic trauma, scopolamin and narcophin being employed for the purpose. Crile is given credit for this idea. The author admits that his 170 cases are too few to establish a new induction, but is entirely satisfied with them as they stand. The range of intervention is the same as in intraspinal anesthesia.—*Medical Record.*

Posture During Anesthesia.

In the Progress columns of this issue of the *Gazette* we publish some interesting data in regard to this important subject—a subject investigated by Dr. Edward Martin and the writer some twenty-five years ago, when we showed that the Trendelenburg posture, or any position, in which the patient's body was partially inverted, produced changes in circulation and respiration of sufficient gravity to be disastrous. While it is true that the posture of a human being, when lying down and when erect, is very different from the posture of one of the quadrupeds, and while it is also true that the tissues which maintain abdominal support in a quadruped are quite different from those in man, nevertheless in an obese man or woman with a large pendulous abdomen, the conditions are nearly the same when they are placed in the Trendelenburg posture as when a rabbit is held by the hind legs and the ears and it is inverted at an angle of 45 degrees. Under these circumstances the bulky abdominal contents of both the rabbit and the man falling against the diaphragm seriously impede the movements of respiration and alter the condition of the general circulation.

The paper which we refer to in our Progress columns definitely names a number of pathological conditions which have been proved to result from the Trendelenburg posture. Our experience, both in the laboratory and since that time with a large number of clinical cases, convinces us that the statement that there is no more certain way of killing a fat woman that by leaving her for some time in the high Trendelenburg position is correct, and it is a particularly dangerous posture if there is cardiac dilatation or feebleness, or if the heart is overloaded with fat.—*Therapeutic Gazette.*

MEDICAL

Case of Prolonged Cheyne-Stokes Breathing.

In the case cited Sheyne-Stokes breathing lasted certainly six months, and from the account given by the patient's wife, pos-

sibly for very much longer. It was present during both sleeping and waking. Although the patient was, as shown by the condition of the retina, the hypertrophy of the heart, and the high blood-pressure, an example of arteriosclerosis, yet the post-mortem examination disclosed that the arterial change was not extensive, for the arteries in the brain were normal, as were many of those in the kidneys, and these organs were not advanced beyond an early granular change. The composition of the alveolar air was determined on several occasions, and it was possible to confirm the findings of previous observers. Observations on the blood dissociation curve by Carcroft's method showed that the blood was abnormally acid, and the authors obtained proof that the respiratory center suffered from diminished excitability. Analysis of the urine and blood proved that lactic acid was not the cause of the increased acidity of the blood. Histolic examination of the respiratory center showed changes similar to those already described by previous observers, although it was impossible to say whether they were the result or partly the cause of the Cheyene-Stokes breathing.—*The Jour. of the Am. Med. Assn.*

The Use of Boiled Milk in Infant Feeding.

Dr. Roger H. Dennett, of New York, stated (before Atlantic City meeting A. M. A., New York Med. Jour.) that milk is boiled for infant feeding not only to destroy bacteria and prevent disease, but to make it more digestible, although boiling has formerly been thought to have just the opposite effect. He believes that the prolongated use of boiled milk during the bottle period does not cause nutritional disorders such as rickets, anemia, malnutrition and poor musculature, provided the proper feedings are given, and cites eighteen cases of his own that were fed with boiled milk throughout the most critical feeding period. Scurvy may be avoided by giving orange juice. He gives his reasons why boiled milk is more digestible than unboiled milk: I. Boiled milk does not cause digestive disturbances when fed to infants who have no difficulty in digesting unboiled milk. 2. Boiled milk is very helpful in overcoming digestive disturbances which are al-

ready present, such as diarrhea and vomiting. 3. Certain infants who are being fed boiled milk often have digestive disturbances brought on by changing from the boiled milk to the unboiled, although many infants who have a greater digestive capacity stand the change without this difficulty.—*Pediatrics.*

Olive Oil.

In the treatment of inveterate constipation, says Hinsdale, in the *Medical Century,* injections of olive oil are of the greatest value. The patient is directed to obtain a quart of the oil and sterilize it by immersion for half an hour in boiling water. At night, after the patient has gone to bed, he is directed to inject from two to three ounces of the oil into the rectum by means of an ear syringe, and not arise, if possible, until morning. The oil, in the course of the night, travels up the large intestine and lubricates the bowel and the hard fecal lumps. The first thing in the morning the patient is directed to go to stool, and if the bowels do not move, to start them with an injection of warm water. Patients who are willing to follow out this treatment for at least a month, and to follow suitable directions as regards diet, are greatly benefited and eventually cured. In connection with this treatment the indicated remedy is given internally, which, in view of a previous history of being addicted to cathartics, is usually nux vomica.—*The Medical Brief.*

Hysteroneurasthenia or Chronic Appendicitis?

Rheindorf concludes a serial article on this subject, in which numerous collateral topic are discussed. One refers to the so-called "normal appendix" removed after apparently mistaken diagnosis. The proportion of these is becoming less, as a result of improved microscopic diagnosis. The entrance of round worms in the appendix is able to set up morbid alterations. Some of the slight changes in the appendix, long deemed artefacts by the microscopist have been explained in this manner. Numer-

ous microscopic sections show the oxyuris in relation to the lymph nodes and spaces, in which they are seen to compress the surrounding parts. The presence in the appendix does not necessarily mean that the patient has ever suffered from seat worms. In regard to women who complain of chronic pain and tenderness over the appendix region these symptoms are certainly nervous in part. It is also true that the condition which gives rise to the nervousness may be the presence of the oxyuris in the appendix. In childhood these worms may do their damage by causing a mild form of afebrile appendicitis. The organ, throughout the resulting kinking, adhesions, fecal calculi, etc., may lead eventually to an infectious appendicitis. This sequence has never yet been demonstrated. The author concludes that vague pains in the appendix region with the latter in seemingly normal condition of the organ means in the vast number of cases that the oxyuris is at fault. In 20 to 30 per cent of all appendicitis in adults, the organ contained the parasite while in children the percentage is 50. But in acute inflammatory cases it is as low as 12. The importance of the problem has become aggravated by the fact that we know as little about the relationship between parasites and appendicitis as we did twenty-five years ago. This lack of progress ought to lead to a special new research of the problem. —*Medical Record.*

Renal Diabetes.

Galambos gives a thorough account of this condition, with conclusions as follows: If with a chronic glycosuria with small or constant amount of sugar we have one or two affections to deal with—viz., ordinary diabetes mellitus with a degree of imperviousness of the kidneys, or a true renal diabetes. If the amount of sugar increases slightly, this points to diabetes, but if it decreases to normal or zero we have to deal with renal diabetes. If the amount of sugar can not in any way be influenced by diet this speaks for the renal type, while the contrary speaks for simple diabetes. Acidosis occurs in the renal form just as in the latter, and hence diabetic coma can set in unless the acidosis can

be controlled by diet, something not expected in renal diabetes, which is in no wise dependent on sugar metabolism. Still the carbohydrates are insufficiently oxidized, as shown by the phloridzin test. The author does not feel warranted in the belief that in any form of diabetes, the renal in particular, there can be a complete absence of the combustion element. We have seen that supposed renal cases end in acidosis, and the diagnosis must be more or less in doubt.—*Medical Record.*

The Technique of Intravenous Injection of Concentrated Neosalvarsan in General Practice.

To perform this operation one requires a ten-gram all-glass syringe, which can also be used in obtaining blood for a Wassermann. As a solvent for the neosalvarsan, a 0.7 per cent sterile normal saline solution is used. The injection is made as follows (Betz, *Chi. Med. Rec.*, Feb., 1914): The glass syringe is sterilized, together with a pure nickel needle. The tube of salvarsan is opened. The syringe is picked up with forceps and freed of water by moving the plunger back and forth until practically dry. The neosalvarsan is now poured into the syringe, the plunger inserted and pushed a little more than half way down. Four grams of salt solution are now drawn into the syringe. (This sterile salt solution may be prepared in four-gram ampules.) By shaking back and forth, the neosalvarsan is readily dissolved. The air bubbles are expelled and the needle attached. The elbow of the patient is washed with sterile water and a tight compress applied to the hanging arm above the elbow. The needle is quickly trust into a visible vein and by pulling back the plunger, blood will flow into the springe. The needle moves back and forth in the lumen of the vein. The upper arm is freed of constriction and the forearm is raised above the horizontal. Gentle pressure upon the piston of the syringe introduces the drug into the circulation. It is quite essential that assistants be at hand to attend to the rising of the arm and freeing it from its constricting bandage.—*Medical Review of Reviews.*

Hereditary Syphilis Reliability of the Wassermann Reaction.

In general the results of the Wassermann reaction in congenital lues scarcely differ from those in acquired syphilic. Children who at first show any sort of leutic symptoms always give a Wassermann reaction. They differ from those acquiring the disease by their persistent resistance to treatment. In these cases changes are very frequently shown in the spinal fluid.

Comparative tests on mother and child, both of whom show clinical symptoms, gives several combinations. Both may be positive or both negative, one may be positive and the other negative, or vice versa.

Knöpfehnacher & Lehndorf get a positive Wasserman reaction in 50 per cent of the mothers who give birth to syphilitic children.

Friedland, on the other hand, found a positive reaction in every such mother. Thomas and Boas say that a positive reaction in the mother gives a sure expectancy of a syphilitic child. Although a child may give a negative result immediately after birth, the reaction may later become positive.

According to Leavy (with Wassermann) almost without exception, both mother and child give a positive reaction. In these cases (and in the Munich Clinic, Busch) the mother showed symptoms of lues in only a small number.

On the ground of serodiagnostic experience it can be said that lues is not directly transmitted from sperma to ovum, but, like all other infectious diseases from an already infected mother, by way of placental circulation. In other words, there can be no congenital lues in a child without a similar latent condition in the mother.

The later manifestations of hereditary lues are keratitis parenchymatosa, disturbances in hearing, bone changes and disturbances in brain development. In keratitis parenchmyatosa the reaction is always positive. In deafness and bone changes one finds frequently a negative reaction, probably due to the long period which has elapsed since the disappearance of florid symptoms.

In idiots a large percentage give a positive reaction, some in the serum, some in the spinal fluid.—*Long Island Med. Jour.*

Hysterectomy and the Operation of Doleris.

The author thinks that the operation of Doleris has not had the popularity which its excellent results have deserved. Direct hysteropexy should be rejected whenever it is possible for the patient to have children, and indirect ligamentopexy should take its place. All procedures in which the abdomen is not opened should be rejected because it is not possible to ascertain accurately the condition of the adnexa, nor know the reality of reduction. The operation of Doleris is the procedure of choice in almost all cases. In a few cases it exposes the patient to danger from hemorrhage or intestinal strangulation. These cases depend on errors in indication for operation, or errors in technic. To prevent these accidents use ligamentopexy in cases of retroflexion, or painful mobility o fthe uterus. Do not fix too high. Make a preuterine fixation as large as possible. There are two anatomical dangers: wounding of the epigastric artery, and destruction of the abdominal wall at the inguinal suture. The place for the passage of the round ligaments is between the two lower attachments to the right. The suprapubic transverse incision is best.—*The Post Graduate.*

Medicines in Nephritis.

On the surface, this seems at first a rather easy question to decide, but the closer it is studied, the more complex does it become. Some physicians claim that as chronic parenchymatous and interstitial nephritis are secondary diseases to some other condition in the body, it is useless to try to treat the kidneys themselves directly by medicines.

There are other, on the contrary, who are firm believers in a definite action of certain drugs on the diseased renal tissues.

As a matter of fact, no doctor should make a fetish of any one drug in any one disease and swear by that. Neither will a nihilistic attitude please the patient nor contribute to his peace of mind. Some medicine of some sort must be given; you can not get away from that.

For certain distressing and disturbing symptoms, few will deny the efficacy of hydrastis and strontium lactate in reducing albumin; nor the diuretic effects of Niemeyer's pill and theobromine sodio-salicylate; nor the relief from headache by caffeine and cannabis indica; nor the eliminative action of calomel and salts; nor the reduction of high blood pressure by the nitrites; nor the effect of strychnine on a flabby heart. Whether the attention be directed to the chief affection and its associated symptoms, a wide and useful range of therapy is at hand from which to select.—*The Virginia Medical Semi-Monthly.*

What Significance Should be Imputed to Smoking in Estimating the Duration of Life.

In the theory of life insurance there is no concern as to smoking or nonsmoking. As a rule there is no question about smoking upon the application blank. Nevertheless in the individual case the prognosis as to the use of tobacco often plays a serious role, when the examiner finds something which might represent the action of nicotine.

The point of view varies much, some regarding tobacco as a race poison from all angles, while others look upon it as harmless when used in moderation. Among the former are those, for example, who ascribe the downfall of the Spanish race to incessant smoking.

We know that millions of men use tobacco without suffering any apparent harm. On the other hand we frequently encounter cases of tobacco poisoning due to abuse of smoking. Individuals react in different forms to the latter. One complains of headache and vertigo; another is anemic; a third is nervous, irritable, and and soon fatigued; a fourth has a tobacco heart; a fifth has amblyopia, etc. Especially pronounced are the effects of the drug when smoked in cigarettes in childhood. Hence it is not only the quantity smoked, but the individual reaction which must be considered. In this regard tobacco ranks with alcohol and coffee.

We should not discuss the ill effects of tobacco alone, but also

the smoker. He may use spirits or drugs, or may be subject to business cares which are aggravated by oversmoking.

Finally, tobacco is one of the great creature comforts, acting, according to circumstances, as a sedative or stimulant to the mind and with little influence on the emotional sphere. No serious attempt is made to calculate any alterations of the expectation of life due to tobacco—*Medical Record.*

Sodium Citrate as a Preventive of Milk Coagulation.

A. W. Bosworth and Lucius L. Van Slyke, Am. Jour. of Dis. of Children, April, 1914, explains that in place of calcium casenate of normal milk, there is a more soluble, double salt of calcium and sodium. In the presence of rennin, a paracasenare is formed which is insoluble for the normal milk, soluble if sodium citrate has been added; 4 milligrams of sodium citrate per 100 c. c. of milk is sufficient to prevent dense curds. (Note: In digestion experiments the gastric filtrate sometimes fails to coagulate milk even when peptonization of egg albumin occurs. This has been taken as an indication of a specific failure of rennin. There is, however, a minority opinion that pepsin and rennin are identical. At any rate, specific failure of one test without failure of the other is quite rare and reliance should not be placed on a negative result of the milk coagulation test until it has been controled with milk known to be coagulable with normal gastric filtrate. Sodium bicarbonate is sometimes added to milk to check fermentation and it is quite possible that diet or impregnation of water with sodium salts may produce a milk containing the double casenate of calcium and sodium—*Buffalo Medical Journal.*

OBSTETRICAL

Ectopic Gestation.

In the proceedings of the Philadelphia Pathological Society, Robert A. Rielly reports a case of eleven months ectopic gestation:

Mrs. H. D., from the private practice of Dr. B. C. Hirst, aged 29 years, married eleven years, one child and three miscarriages. History of menstruation ten months previous to examination. When abdomen was opened a large sac was found from which a dead fetus was delivered; a portion of the sac was dissected out and the remainder sutured to the abdominal wound and drained. There was a complete and perfect recovery.

Specimen is a white male child; measures 22 inches; weight 8 pounds. The child is oversize, but development externally and internally is perfectly normal. The nails are long, the skin discolored by a brownish-yellow, creamy material, due to the intestinal contents escaping from an open sphincter. No odor. Panniculus and internal organs are of a dark black color, suggesting post-mortem degeneration without putrefaction. Placenta measures 80 inches in diameter. Pregnancy took place in the outermost part of the tube into the broad ligament. A cystic ovary and part of the tube is still attached to specimen—*The Lancet-Clinic.*

Obstetric Hemorrhage.

Among the various points emphasized by Jung in treatment of threatening hemorrhages after delivery, is that any attempt to tampon the uterus fails of its effect unless the uterus is packed clear down to the fundus: the tamponade should never be allowed to remain for more than twenty-four hours on account of the danger of infection. After delivery of the child, as long as the uterus feels hard and does not bleed, no attempt should be made to force out the placenta until at least forty-five minutes have elapsed; this law is frequently broken for various reasons, but atony of the uterus is too often the penalty, with uncontrollable hemorrhage. Only in case of placenta praevia or premature separation of the placenta are earlier active measures justified. Atony is particularly liable to occur if the uterus has been abnormally distended by hydramnion, twins or hydrocephalus, or has been subjected to unusual strain at delivery from contracted pelvis, rigid soft parts or disproportionately large children. Also when

the uterus has been rapidly evacuated by forceps or section before labor has been installed, and also when the woman has had similar atony of the uterus at preceding pregnancies; a habitual atony of the uterus may be feared. In all these circumstances 10 liters of boiled water kept at 40 or 50 c. should be in readiness, with material for tamponing and a rubber tube for the Momburg technic for belt constriction. No ergot should be given before expressing the placenta and the bladder should be empty at the time.—*The Journal of the American Medical Association.*

Pituitrin in Sixty Cases of Labor.

In the *British Medical Journal* of April 25, 1914, Hendley makes a report. He states that pituitrin, or pituitary infundibular extract, is now becoming generally accepted as a valuable aid to the obstetrician. Its property of inducing strong rhythmical contractins of the uterus, first pointed out by Dale, is so marked that it is surprising that it has not been more generally adopted by the practitioner. In these circumstances, this record of sixty cases may prove a sufficient stimulus to those who have not experienced its merits to in induce them to try it in the early future.

It is necessary, however, to observe ordinary caution in its administration, and great care should be taken where there is any obstruction. It is a very valuable aid toward shortening the long and often exhausting first stage of labor, especially in those cases in which the membranes rupture early, and a dry labor results.

It has proved in Hendley's hands to be a powerful remedy in cases in which shock and collapse have supervened on prolonged chloroform anesthesia, not infrequently inseparable from a difficult case of contracted pelvis. In patients of a nervous temperament pituitrin has also a great influence, and the excitement is frequently calmed in an extraordinary manner.

Recovery is almost invariably hastened, and patients who have previously had pituitrin nearly always ask for its repetition. Hendley asserts he has never had a case of postpartum retention of urine since using this remedy; indeed, in one case in which it

might reasonably have been expected, a free and copious emission of urine resulted within one hour of its administration. As a controller of hemorrhage pituitrin ranks very highly in his estimation; in one case it controlled the hemorrhage when a previous injection of ernutin had failed. Some writers have recorded postpartum hemorrhages as a sequel of pituitrin administration, when delivery of the child did not take place until an hour or more after its administration. Hendley has observed this on a few occasions, but if a second injection be given this does not as a rule occur. In any case a further dose will almost always control the hemorrhage, as it did in three of his cases. In one case the patient in five previous confinements had had postpartum hemorrhage, while on this occasion it was particularly noticeable by its absence.

Hendley has worked out the following technique as the best routine method for the administration of pituitrin. When the os admits one or two fingers, but not before, he injects into the gluteal muscles from 0.75 to 1.0 Cc. of pituitrin; if the child is not born within fifty minutes he repeats if necessary. If postpartem hemorrhage supervenes, a further injection will almost always control it. Care should be taken to make sure that the syringe and needle are quite free from alcohol before filling with the pituitrin, as alcohol is said to interfere with its action.—*Therapeutic Gazette.*

Editorial

PUBLISHER'S NOTICE—The Journal is published in monthly numbers of 48 pages at $1.00 a year, to be always paid in advance.

All bills for advertisements to be paid quarterly, after the first insertion of the quarter.

Business communications, remittances by mail, either by money order, draft, or registered letter, should be addressed to the Business manager, C. S. Briggs, M. D. corner Summer and Union Streets, Nashville, Tenn.

All communications for the Journal, books for review, exchanges, etc., should be addressed to the Editor.

A STEP FORWARD IN MEDICAL EDUCATION.

The appended communication, which is self-explanatory, serves to show the trend of progress in the system of medical teaching and will doubtless be of great interest to our readers. This is a departure from old methods, the successful issue of which is conjectural and results will be watched with great interest by all.

JULY 5, 1914.

Delivery will be made tomorrow at Baltimore of securities valued at $1,500,000, presented by the General Education Board to the Medical School of Johns Hopkins University. This gift is to be known as the William H. Welch Endowment for Clinical Education and Research.

The securities will be accepted on behalf of Johns Hopkins Medical School by Mr. R. Brent Keyser, Chairman of the Board of Trustees. The actual transfer of the principal of this fund to John Hopkins University signifies that an important and novel feature relating to the gift will have become an accomplished fact, namely, that the organization of the Medical School should be so arranged that the entire income from this fund could be utilized for the support of full-time teaching and research departments of Medicine, Surgery, and Pediatrics, or Diseases of Children.

The express proposal made by the trustees of the Johns Hopkins University was that in reorganizing these three departments, professors and their assistants should hold their posts on the con-

dition that they become salaried university officials, and that they accept personally no fees whatever for any medical or surgical services which they might render.

The hospital wards and out-patient departments are to be under the control of the university medical or surgical teachers, but over and above their work in the public wards, the teachers are to be free to render any service required in the interest of humanity and science. They are to be free to see any patient they desire to see.

Patients, however, of the usual private patient type, will pay a reasonable fee to the University, rather than to the professors personally. The time and the energy of the professors are to be fully protected, not only because their salary eliminates financial interest on their part, but because they are themselves to become sole judges as to whether or not particular cases shall or shall not command their personal attention.

In order that the time and energy of the professors thus safeguarded might be properly utilized under favorable conditions, the endowment was made large enough to provide adequate salaries to attract the ablest professors and also to provide them with assistants, well-equipped laboratories, books, and other necessary facilities.

Simultaneously with the completion of the reorganization of the Johns Hopkins Medical School in accordance with this new plan, the University trustees have chosen Dr. Theodore C. Janeway, hitherto Professor of Medicine at Columbia University, to become Professor of Medicine of the Johns Hopkins Medical School, the position once held by Sir William Osler.

The chair of Surgery at Johns Hopkins, under the full-time arragement, is to be occupied by Dr. William S. Halsted, most of whose surgical career has been passed in the Johns Hopkins Medical School, where, since the establishment of the Johns Hopkins Hospital, Dr. Halsted has been its Surgeon-in-Chief and Professor of Surgery.

The Chair of Pediatrics will be occupied by Dr. John Howland, who was called a year ago from the Professorship of Pediatrics at Washington University, St. Louis, and appointed physician in

charge of the Harriet Lane Home for Invalid Children, this institution being the pediatric clinic of Johns Hopkins Medical School.

Johns Hopkins will become the first medical school to be placed upon the full-time basis in all departments. A grant of $750,000 has been made to Washington University, St. Louis, and of $500,000 to the Medical School of Yale University, upon an understanding that they also reorganize their work so as to put their clinical teaching upon a full-time basis.

The full-time scheme is a plan to ensure to hospital work and medical teaching the undivided energy of eminent scientists whose efforts might otherwise be distracted by the conflicting demands of private practice and clinical teaching. The full-time scheme is an appeal to the scientific interest and devotion of the clinician, and it is significant that the first three full-time posts created have been filled by men of conspicuous professional standing, all of whom have made great sacrifices in order that they might enjoy ideal conditions for clinical teaching and investigation.

It should become of increasing consequence to the public that the training of those studying to become doctors should be in charge of the most competent men obtainable devoting their entire time to this work. Greatly increased efficiency and thoroughness should result, to the alleviation of suffering and the cure of disease.

Leper Settlement.

Armed with a permit from the Board of Health of the Territory of Hawaii, without which access is not permitted, I was landed after severe buffeting by many waves in a crazy vessel, at the leper settlement on the Island of Molakai. My stay was from the emergencies of commerce either too short or too long. I choose the former, which made my visit rather hurried. The villages of Kalaupapa and Kalawa, which comprise the settlement, are built on a peninsula thrown out into the sea from volcanic action and comprising about ten square miles. This is covered in a large part by volcanic rocks, though part of it is well suited

for gardening and agriculture. The base of this peninsula is an abrupt cliff or range of mountains from two to four thousand feet high. It reminds one of the field of Marathon. "The mountains look down on Marathon and Marathon-on-the-sea. "It is indeed a beautiful prison, but when the alternative was given me of a stop there of a part of a day or a week I choose the former. Arrived at Kalaupapa at daylight. We were landed at six and I was conducted to the residence of Dr. W. J. Goodhue, physician-in-charge. As an example of the influence of music in medicine the band stand was placed in front of the doctors house. This house was a neat cottage surrounded by flowers and shrubbery and a high pailing fence with a double gate, one within the other at a distance of about four feet. In front of the porch was a wide board which one was obliged to climb over. The doctor was found out negligee attending to his flowers. The broad board indicated the presence of little ones, who were soon in evidence. Asking about the double gate I was told that as the lepers sometimes came and leaned on the outside gate the inner gate was to keep the children from touching what the lepers had touched. Surely a double devotion to bring up children in a leper settlement.

The doctor had his auto brought out and took me over to see Dr. George W. McCoy, director of the United States Leprosy Investigation Station. The doctor showed me very carefully over his establishment. The U. S. Government has given him a very valuable plant at the cost of about $100,000. It consists of laboratory and animal house and place for the doctor, family and attendants to live and a small hospital to keep patients in for treatment, experimentation and observation. The majority of the patients in this department have been treated by vaccines that is killed or attenuated cultures of the leprosy bacillus, the remainder from the serum from the horse immunized against B. Leprae. The majority of the patients have expressed themselves as improved under the treatment. In some there was an apparent amelioration of the symptoms, but it proved only due to change of environment, hygiene, diet and the mental effect. Acid-fast organisms have been found in two head lice taken from the

head of a case of nodular leprosy. The doctor said that it was with regret that he had to say that his work had not contributed any material advance to the therapy of leprosy or our knowledge of the transmission of the disease. They were unable to state positively that it was transmissible in man or beast by inoculation.

The resident physician finds Chaulmoogra oil the most popular remedy. Strychnine or ethyxir of iron, quinine and strychnine according to preference. That both are decidedly ameliorative, it is the most that can be claimed for them. Antitoxin emulsion and serum have been used and both have drawbacks. Seventy-five per cent of the inmates of the leper settlement receive special treatment for leprosy. The doctor reports one very interesting case cured by surgery.

The church and grave of Father Damien, also other priests who gave up their lives to the lepers, were shown me in the little churchyard. Also the Protestant church, the church of the Mormans and the Y. M. C. A. Picture shows, athletic clubs and various form of amusement and labor serve to while away the weeks. There is a visitors house where relatives and friends may come and visit it for a time, but are not allowed to circulate among the patients. The lepers are comfortable and happy, most of them more so than in their home surroundings. Many who are so far relieved as to be permitted to leave the settlement prefer to stay. Children are born in the settlement in a healthy condition and after a time are sent to relatives or a home for lepers' children. The doctors and attendants certainly deserve credit for their devotion to such a hopeless work. The cases which I saw at Molokai were much more interesting than those seen in Palestine and India.—*E. S. McK.*

Publisher's Department

"*Solution of Albuminate of Iron*" (Liquor Ferri Albuminatis, Flexner). Contains 13% alcohol. Each teaspoonful of this preparation represents one grain of Dry Albuminate of Iron in permanent solution. A most valuable form of Iron Tonic. Prepared by Robinson-Pettet Co., incorporated, Louisville, Ky. (See advertisement in this issue.)

Acute Prostatitis. Sanmetto.

In the treatment of acute prostatitis salicylic acid internally in five-grain doses, and sanmetto in teaspoonful doses tends to diminish the source of infection, reduce the existing inflammation, and encourage resolution. The sanmetto being a mild, soothing, resolvent diuretic also tends to allay the suffering of patient. If the urine is acid citrate of potassium in ten-grain doses will aid in relieving irritation and tenesmus. As further measures for reducing inflammation, light diet, absolute rest in bed, free movement of the bowels, and local application of heat by means of sitz baths, or hot water bag, should be enjoined. If the sanmetto is kept up urinary retention is not likely to supervene, unless there is a previously hypertrophied prostate; in that case the bladder should be emptied by a soft catheter at intervals, still keeping up the use of sanmetto. The prostate should not be massaged during the inflammatory state, but during the period of resolution massage will aid the process.

Case of Septic Infection Controlled by Glyco-Thymoline.

Dr. ————, Philadelphia, Pa.—

I will make no attempt at an article, but will offer a simple statement of facts that tells its own story:

Case 1—Was called to see a young married woman, Mrs. B., age 24; found her with a temperature just under 105° F. She

had met with an accident and injury to the abdomen a few days before. A careful examination showed macerated foetus. With the aid of an assistant the uterus was thoroughly curetted and irrigated with solution Hydrarg. Bichloride 1-10000, bbut with unfortunately no material reduction of temperature, four irrigations of Hydrarg. Bichloride, same strength, offered no material improvement, and to myself and colleague, the case seemed hopeless. I then irrigated the uterus with Glyco-Thymoline, full strength and packed with gauze saturated with the same solution. The temperature, which was 104.8° fell to 99.2° in two and one-half hours and there was no discharge. This requires no comment from me or anyone else. It simply shows that sepsis can be controlled and eliminated by Glyco-Thymoline, when the best of acknowledged germicides, Bichloride of Mercury, had failed.

January, 1901.

Reviews and Book Notices

"Local Anesthesia"—By Dr. Arthur Schlesinger (Berlin). Translated by F. S. Arnold, B.A., B. Ch. (Oxon). Illustrated. New York. Rebman Co., Herald Square Building, 141-145 West 36th St.

This is a very valuable contribution to modern surgical technique and will be a handy guide to all who do surgical operations, both major and minor. The field of local anesthesia is widening from day to day and the efficiency of the method is being perfected in every department. We regard this little book as a very valuable contribution to surgical literature and feel satisfied that all who use it will find it a reliable and helpful guide in the use of the method.

"Ambidexterity and Mental Culture," by H. MacNaughton-Jones, M.D., M.Ch., I. U. I., M. A. O. R. U. I. (Hon. Can. J. F. R. L. S, I, and Ed. Ex-University Professor, Livens University, Ireland, etc., etc. New York. Rebman Co., Herald Square Building, 141-145 West 36th St.

This little brochure is a very important contribution to the literature bearing upon a very important subject and as far as it goes will be authoritative upon the questions involved. The theme discussed is the influence that the cultivation of ambidextrous exercises have on the mind of the growing child, and the effect such psychological efforts have upon the child's character. The subject has been carefully and critically studied by neurologists and physiologists and in this little book the author has carefully reviewed the conclusions so far reached. We feel sure our readers will find much to interest them in the work.

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Original Communications

CHRONIC VISCERAL PAIN IN RELATION TO SURGERY AND PSYCHOTHERAPY.

By Tom A. Williams, M. B., C. M. (Edin), Washington, D. C.
Pres. Nat. Soc. Ment. and Nervous Diseases; Memb. Corresp. Socs. de Neurol. et Psychol. de Paris; M. Am. Psychopathological Asso., Etc., Neurologist to Epiphany Free Dispensary.

American surgeons and gynecologists have at last decided almost unanimously that the "neurasthenia" accompanied by viscera ptosis is not at all benefited by operative replacement. But Dr. Mayo (Congress of American Physicians and Surgeons), May, 1910, confesses himself at a loss what to do with such patients; as most of them were sent him by neurologists, who had failed to relieve their suffering. He thought that something like Christian Science might be the best thing. Only a few week's ago, indeed, a United States Senator, in seeking against the proposal to unify all present Federal medical agencies, pleaded dramatically for the cult which had restored to health his wife and self, invalids of long standing, whom doctors had failed to improve, and his son, a dipsomaniac, with whom also regular doctors had failed.

But the answer to Dr. Mayo's question is not a negation of the facts of the world like Christian Science, but a measure based

upon rational psychology and a grasp of the genesis of hysterical fixed ideas, and psychasthenic obsessions and phobias. The following cases show the simplicity of the procedure when the principles of diagnosis and treatment are understood, and that as Trissand said, to use training before rather than after an operation.

Hysterical Appendicitis of three Months' Standing Cured by Psychotherapeutics After Failure of Surgery.

Case 1—(girl of 20 years was referred by Dr. Watkins and Dr. Stavely because of recurrences of right iliac pain with nausea and vomiting, but with normal temperature and pulse, since three months. Two months before, the appendix had been removed for similar symptoms, and found little changed, though containing a concretion of lime. At the time, the ovaries and gallbladder were found normal. The pains recurred every few days and lasted some hours, and were relieved by morphine or the Scotch douch. Examination showed only a psychogenic hyperesthesia in the right iliac fossa, controllable by indirect suggestion. Some colonic atonia, a slight retroversion and intestinal sand could not explain a manifestly psychogenic tenderness. So, after a few days, Dr. Watkins, armed by conviction derived from the consultation, entered the fray, and after a struggle of nearly two hours convinced the young woman that determination to conquer a longing for the comforting and anodynes which sickness brings would cure her. She went back to Illinois next day, and remains well.

Such rapid success is not common. The following similar case illustrates the need of persistence in persuasion.

Coccygodynic Neurasthesia from Hernia.

A girl of 34 years was referred by Dr. Lemon because unbenefited by uterine suspension, amputation of the coccyx and other gynecological measures. She was lying stiffly in bed for fear of hurting the coccyx, with intense right iliac pain and tenderness. I found the latter modifiable by suggestion, as was the stiffness.

There was a false, i. e., volitional Kernig's sign; and the reflexes were sluggish. She wore the martyr smile but professed anxiety to recover and go to work.

Her condition was manifestly psychogenetic, but her sister's belief in its organic nature hindered recovery, in spite of the persistency of Dr. Lemon. But, at my instigation, he kept persuading, until finally improvement began, and one day the young woman, determined to put it to the proof, went to work, succeeded in the fierce struggle against giving way, and is now more capable than she has ever been before.

Hysterical Spasm from Appendicitis; Secondary Neurasthenia. Cure in Two Weeks by Re-education.

Case III—A case, intermediate as to duration of treatment, was seen recently with Dr. I. S. Stone. The patient had had a dull pain since an attack of appendicitis six years before, but had gone on working in her dairy in spite of it, until it wore her out. After this, a spasm of the iliac muscles supervened. She declared herself nervous because she suffered so intensely. She would start at noises, and could not sleep after excitement; so she gave up visiting her friends. The only neurological signs were the hyperæsthesia and spasmodicity in the right iliac region.

I taught her to inhibit the spasm by drill, and assured her that the hyperæsthesia would disappear as a result of the operation which Dr. Stone had performed three weeks before. But as the spasm had become a habit, and gave rise to pain by stretching the muscles, she would have to learn to control it by means of a series of exercises in muscular inhibition, which I showed her to perform. She made quick progress at first, but relapsed on account of a physical depression, which I found to be due to disordered metabolism from the egg and milk diet which the recumbent posture did not enable her to metabolize. When this was rectified, the psycho-motor discipline was again persevered with, and she returned home, almost well, two weeks after I saw her.

Of course, the key to each case is that the physician have a clear notion of the mechanism of hysterical fixed ideas, of which the idea of pain and tenderness is not the least frequent.

Still the technique of psychotherapy is not hard to achieve *after psychopathological data have been acquired.* But to attempt psychotherapy without knowing to what it is being applied is as fatuous as the grossest empiricism in any other part of medical or surgical art.

"Just as the surgeon requires, first, a minute knowledge of anatomy and pathology; second, the good sense to apply this knowledge clinically; third, acquaintance with and a practice of technical advances in his art; so the psychotherapeutist requires first, a minute knowledge of psychology and psychopathology (I exclude all metaphysical notions, which unfortunately are rife in much of which has been written on psychological medicine); second, the acumen to use this knowledge clinically in diagnosis; and third, the acquaintance with and the practice of technical procedures as they improve."—*Physiological Measures in the Treatment of Nervous Diseases, American Journal of Psychological Therapeutics,* January, 1911.

As the cases show, the principle of the treatment is to teach the patient to use the disabled part in spite of the tenderness excited. This requires training; and it is the doctor's duty to give it himself or through a nurse. Of course discretion must be used not to apply this treatment to the pain of active inflammation. Again, there are times when a patient should not be urged, such as case three shows. It is in such contingencies that lay psychotherapy is palpably defective. I can not here enter further even into the principles which should guide the physician as to when to urge and when to rest the patient. Psychological tact and experience can hardly be inculcated in a short space. The reader who is interested may consult *Nursing for Neurologist, The Trained Nurse and The Hospital Review* for June, 1910; also cases showing the origin of Hysterical and Pseudo Hysterical Symptoms, *American Journal Medical Neu.,* August 9, 1910; *Forthnesing Treatment of Hysteria, Jour. Nerv. and Ment. Dis.,* 1758. W. W.

Proceedings of Societies

AMERICAN PROCTOLOGIC SOCIETY.

Sixteenth Annual Meeting, Held at Atlantic City, N. J., June 22 and 23, 1914.

"Extracts from the Report of Proctologic Literature from March, 1913, to March, 1914."—By Samuel T. Earle, M.D., of Baltimore, Md.

In Samuel T. Earle's review of Proctologic Literature from March, 1913, to March, 1914, he quotes from the following authors, giving the salient points from each of their papers:

Percival P. Cole, M.B., Ch. B. F. R. C. S. England (British Medical Journal, Vol. I, 1913, page 431) "The Intramural Spread of Rectal Carcinoma."

Robert A. Bachman, M.D., Newport, R. I., Surgeon U. S. Navy. (Journal of American Medical Association, Vol. L., 1913, page 1154.) "A New Method for Hemorrhoids."

Jerome M. Lynch, M.D., New York City. (The American Journal of Obstetrics and Diseases of Children, February, 1914, page 322.) "Blocking the Sympathetic by a Method Other than Spinal Anesthesia to prevent shock in the combined operation for Cancer of the Rectum, or Recto-Sigmoidal Juncture, with some Improvements and Modifications of Technic."

Charles R. Robins, M.D., Richmond, Va. (The Old Dominion Journal of Medicine and Surgery, May, 1913, Vol. XVI, page 236.) "Sliding the Rectum in the Cure of Various Defects."

Granville S. Hanes, M. D., Louisville, Ky. (Kentucky Medical Journal, Vol. XI, June 25, 1913, page 516.) "Anal Pruritus Treated by Operation; Report of Case."

Frederick H. Williams, M.D., Boston, Mass. (New York Medical Journal, Vol. XCVII, 1913, page 875.) "Electricity in Rectal Diseases. A Neglected Resource in their Treatment."

T. F. Riggs, M.D., Pierre, S. D. (The St. Paul Medical Journal, Vol. XV, page 461.) "Fistula-in-Ano; Its Rational and Successful Treatment."

P. Lockhart Mummery, F. R. C. S. England. (The Lancet, Vol. II, 1913, page 72.) "Operation and After-Treatment of Fistula-in-Ano."

Harvey B. Stone, M.D., Baltimore, Md. (Annals of Surgery, Vol. XVIII, 1913, page 647.) "Immediate and Late Results of the Whitehead Operation for Hemorrhoids."

Daniel Fisk Jones, M.D., Boston, Mass. (Boston Medical and Surgical Journal, Vol. CLXIX, page 707.) "Carcinoma of the Rectum."

James W. Heslop, M. B., M. R. C. S., New Castle-on--Tyne, England. (The British Medical Journal, February 28, 1914, page 476.) "Dissemination in Carcinoma of the Rectum."

"Coccygodynia: A New Method of Treatment by Injections of Alcohol."—By Frank C. Yoemans, A.B., M.D., of New York City, N. Y.

The diagnosis is established by a thorough examination, both general and local. Local examination is made by inserting the index finger into the rectum and palpating the coccyx between it and the thumb outside. The soft parts intervening between the coccyx and anus are now compressed and the point of maximum tenderness is thus located, usually just beyond the tip of the coccyx. Proctoscopy rules out rectitis.

The prognosis hitherto has been better in the traumatic cases than in those of frank neuralgia or neuritis. The writer confidently predicts that the treatment proposed will render the latter equally amenable to treatment.

The writer proposes a treatment based on the suggestion of Schlosser in 1907, of injecting 70 to 80 per cent alcohol in sensory nerves, thereby causing their degeneration as practiced with marked success in trifacial neuralgia.

The technique is simple and can be carried out in the office under strict aseptic precautions. The patient with empty bowel is placed on a table in the Sims' position and the skin about the coccyx painted with tincture of iodine. A 2 c. c. Luer or similar syringe is filled with 80 per cent alcohol and armed with a two-inch needle. The right index finger is now inserted into the rectum and the point of maximum tenderness is determined by counter pressure with the thumb outside. Maintaining the finger in the rectum to guard against puncture and as a guide, the needle is introduced through the mid-line directly to the painful spot, and 10 to 20 minims of solution are injected slowly.

The needle is withdrawn and its puncture sealed with collodion. The pain from the injection lasts a few minutes and is followed by a dull ache which may last a day or two. From three to five injections are usually required at intervals of about one week.

The writer reports seven cases, all women, treated from two months to four years. They required three, four or five injections each at intervals of about one week. Relief was prompt and complete and all the patients have remained well.

"The Technique of the Perineal Operation for Cancer of the Rectum."—By J. A. MacMillan, M.D., of Detroit, Mich.

In every case a preliminary colostomy must be considered imperative. The colostomy provides the only means of discovering whether a radical operation is justifiable or not, supplies physiologic rest for the affected part, and later provides for aseptic conditions in the surgical field.

After thorough divulsion a circular incision is made at the muco-cutaneous line and carried up to the lower surface of the levator ani. Most of the dissection can be done by the fingers. It is not necessary to destroy the external sphincter. This step

of the operation exposes a circular area of the levator ani about an inch and one-half wide. Before proceeding further the hemorrhage should be controlled and the location of affected glands determined.

The next step of the operation includes the division of the levator ani and the removal of lymphatic glands.

The peritoneum may be entered anteriorly and separated laterally, which will leave the mesosigmoid as the only attachment of the bowel. This should be divided as far from its colonic attachment as possible in order to secure the retention of a good vascular supply for the proximal end of the bowel after the excision.

When the gut can be drawn down sufficiently to permit the excision of the affected portion and the attachment of the lower edge of the mucous membrane to the skin, excision is done and the sutures placed. Free drainage is necessary.

The colostomy is not closed until the patient has been up and about for several weeks.

"Myasthenia Gastro-Intestinalis."—By V. Lee Fitzgerald, M.D., of Providence, R. I.

By the term "myasthenia gastro-intestinals" is understood a weakness of the muscles of the abdomen, stomach, intestines, and their supporting ligaments, with a consequent downward displacement of many or all of the viscera.

Many patients suffering from myasthenia in its different forms are in danger of having suspensory or other operations performed upon them, whereas the intestinal stasis can be entirely removed by medical measures and the baneful affects of the underlying ptosis entirely removed.

The general aim in the treatment is the relief of the stasis, and the restoration of the prolapsed viscera to as near their normal position as possible.

The success in the treatment of these patients depends not only upon the relief of stasis, but also upon the patient's active and persistent co-operation.

For the past two years the writer has been treating cases of myasthenia as follows: The patient is given a thorough examination, including that of the gastric contents, urine, and feces. In case of myasthenia of the stomach with dilatation and prolapse the patient is put to bed and fed through a duodenal tube six or seven times a day, depending upon the amount of food needed to nourish the patient. This gives the stomach a complete rest, and it comes up into normal, or nearly normal, position in from ten days to two weeks.

"Further Observations of Pruritus Ani: Its Probable Etiological Factor; Results of Treatment."—(A fourth report, based on results of original research.)—By Dwight H. Murray, M.D., Syracuse, N. Y.

In this report on the fourth year's work of original research on pruritus ani, the author finds there is not much more to give to the profession beyond the confirmation of the work of previous years. He has yet no reason to doubt his claims for the infection theory of pruritus ani.

Twenty new cases have been examined during the past year. In all but two of these streptococcus fecalis has been demonstrated.

It has been found that occasionally the bacterial growth seems to be so lacking in strength that it is difficult to obtain an autogenous vaccine. It is not known why this is so unless it is owing to the very low grade inflammation produced by germs not so active as those found in many other infections.

During this year two cases were treated by other physicians who tried to follow his technique, but in neither case was improvement manifest, notwithstanding that streptococci were found present by the author's bacteriologist, and although the same quality of vaccines were used. With the consent of their physician the author took up the treatment. Improvement was marked. The only point of difference in the technique that he could discover was that the others injected the vaccine deep into the muscle instead of directly into the skin or immediately beneath it.

During the past year the author has had additional proof that the itching does not extend appreciably above the white line of Hilton. He has also had continued confirmation of his previous statement that the moisture found upon the parts is not a discharge from the rectum.

This past year's work again shows that other rectal diseases are not present regularly with pruritus ani, and the belief is confirmed that they are coincidental instead of etiological.

No unfavorable sequelae arose from the vaccine injections. There is now no hesitation in running the dose up to two billion or more dead bacteria. One injection resulted in formation of a jelly-like material in the tissue but this was absorbed. Some time ago a similar swelling was opened and found to be sterile, and no trouble has resulted.

"A Report of Cases of Pruritus Ani Treated with Carnotite."—By Samuel T. Earle, M.D., of Baltimore, Md.

Carnotite, a radio-active mineral, was used in the treatment of eight cases of pruritus ani and was found to be a very satisfactory palliative remedy.

"Treatment of Amebic Dysentery by Emetine Hydrochlorine."—By Alfred J. Zobel, M.D., of San Francisco, Cal.

The writer gives a brief culling from the literature on the emetine treatment of amebic dysentery, and also a few words relative to the drug itself.

He states that in emetine hydrochloride we have a reliable, non-toxic drug possessing a definite specific action which may be administered hypodermically, and yet which will permit of a sufficient dose being given without causing any depression, nausea, vomiting, or local reaction.

He reports two interesting cases in which the disease was present in one individual for ten, and in the other for fourteen years. Under the influence of emetine, within two or three days amebae, blood, mucous, froth, and foul odor disappeared from the dejec-

tions and their number greatly decreased; the racking tenesmus, bearing down feeling in the rectum, the colic, and the abdominal tension, discomfort and gurgling absolutely ceased.

Proctoscopic examinations revealed the favorable influence of the drug upon the amebic ulcerations. No amebecidal irrigations were employed.

He further reports other cases seen by him in consultation which demonstrate most forcibly the necessity for a proctoscopic examination of the bowel and a microscopic examination of the feces in every instance where a diarrhoea lasts longer than a week, even though the patient has never lived in nor visited a locality where the disease is known to exist.

He advises that emetine should be given for at least three or four months at intervals before the patient should be considered free from the possibility of a recurrence, even though he is clinically cured and the amebae can not be longer found in the stools.

"Amebic Dystentery and Its Treatment."—By Dr. Wm. M. Beach, of Pittsburg, Pa.

The writer of this paper states that:

(1) Amebic dysentery in the early stages may be cured with emetine. (2) In cases somewhat advanced emetine is efficacious and at least clinically curative. (3) The use of the duodenal tube, through which to introduce solutions of emetine to any portion of the intestinal tract, should receive trial and consideration. (4) For rapid cure, and control, cecostomy or appendicostomy is the best measure in advanced and chronic cases. (5) Direct irrigation from above is superior to rectal injections, in that it is less than painful and more thorough. (6) The appendix should be removed in most cases of amebic dysentery. (7) The so-called specific emetine can be easily applied in weak solutions.

"The Pathologic Sigmoid Colon and Its Surgery."—By L. J. Hirschman, M.D., of Detroit, Mich.

Studies with the fluoroscope and the sigmoidoscope have shown that true prolapse and invagination of the sigmoid colon into the

rectum is not an uncommon condition. The author advocates shortening the mesentery of the sigmoid by attaching the mesentery of the invaginated or prolapsed portion of the root of the mesentery of the descending colon.

In a number of cases of obstruction to normal defacation, this obstruction will be found in women who give a history of a disturbed puerperium. Radiographic studies of these patients who give a history of chronic obstipation accompanied by pain and marked tenderness in the left lower abdominal quadrant and the region of the womb and broad ligaments, more often the left, show the presence of adhesions which angulate, displace or bind down the sigmoid. The cure of this condition involves the relieving of the adhesions and the covering of raw areas with omental, epiploic or mesenteric grafts, or the excision or short-circuiting of the sigmoid. Another class of adhesions of the sigmoid seriously obstructing defecation is caused by adhesions to the abdominal wound following laparotomy.

Hypertrophy or redundancy of the sigmoid colon is another pathological condition which has not infrequently been met with. When the walls of the bowel contain a large proportion of unyielding fibrous tissue, short-circuiting is insufficient and excision is indicated.

In malignant growths of the sigmoid colon, excision with immediate anastomosis is the ideal indication.

When inoperable it is is the author's practice to always make the colostomy in the median line. This is done for the following reasons: First, the median incision is the best for exploratory purposes. Second, one has the choice of any part of the colon in the making of the colostomy. Third, one gets just as good adhesion and union, with no more liability to hernia, as in the side. Fourth, the patient is better able to cleanse and dress the colostomy in the median line. Fifth, it takes the colostomy opening away from the neighborhood of the iliac crests, and allows of the better fitting of retention apparatus and colostomy shields. Sixth, control of a median colostomy is just as satisfactory as the lateral.

The author has found no difficulty in securing colostomy control by using a small rubber catheter in the mesenteric opening beneath the spur and encircling the upper limb of the colostomy with this catheter, drawing it just snug enough that the mucous surfaces appose. The catheter is held in this position by a seraphine snap and is released by the patient when he wishes to defcate or expel flatus.

"Myxorrhea Coli—Myxorrhea Membranacea and M. Colica (Membranous Enteritis-Mucous Colic)"—By Dr. S. G. Grant, of New York City, N. Y.

The essayist explained that myxorrhea coli was a symptom complex characterized by constipation, abdominal pain, uneasiness or soreness and the periodic evacuation of jelly-like strips or casts of tenacious mucous on the one hand or colic on the other and suggested that all mucous discharges be designated as *myxorrhea coli* with which understanding the former is called *myxorrhea membranacea* and the latter *m. colica.*

The writer conceded that either type of myxorrhea coli may be secondary to neurogenic disturbances but strongly maintained that M. membranacea and M. colica are frequently produced by many other conditions and diseases, medical and surgical, several of which may be factors in the same case. He had often known these conditions to be caused by psychic, neurogenic, gastrogenic and enterogenic disturbances, adenoidism, thyroid disease, impaired metabolism, abnormal menstruation, affections of the heart, liver and pancreas, inflammatory and ulcerative lesions (colitis), helminths, foreign bodies, prolonged or irritating colonoclysis, various lesions which induce chronic intestinal obstruction and led to coprostasis and autointoxication and other ailments which cause the hypersecretion or retention of mucus. The writer had observed patients who suffered at first from myxorrhea membranacea and later M. colica where the mucus became inspissated irritating and excited enterospasm.

The writer maintained that the *diagnosis* was easy in uncomplicated cases and that myxorrhea membranacea could be

recognized by its *symptom complex,* obstinate constipation, uneasiness and soreness or pain in the lower left abdominal quadrant and the periodic discharge of strips, casts, or jelly-like masses of mucus, and that where subsequent to these manifestations and in the absence of signs pointing to intestinal obstructions from other causes colic suddenly supervenes, one is justified in making a diagnosis of myxorrhea colica.

The essayist discountenanced a routine treatment in these cases and advised holding curative measures in the abeyance until the acute symptoms subsided.

The removal or correction of kinks, twists, strictures, invaginations, adhesions, pericolic membranes and other lesions obstructing the bowel or causing stasis, effected a cure in many of the writer's cases and he rarely found the bowel sufficiently incapacitated to require resection, exclusion, or the establishment of an artificial anus.

In conclusion, the writer stated that myxorrhea membranacea and m. colica were common affections and more frequently responded to surgical treatment than the literature of the subject would indicate.

"Peri-Rectal Gumma: Report of two Cases."—By Alois B. Graham, M.D., of Indianapolis, Ind.

The subject peri-rectal gumma owes a great deal of its interest to its rarity. The author reports two cases which are rather unique. They were seen within twenty-four hours of each other, and both presented a typical peri rectal gumma, in that no lesion of any kind could be detected in the rectum of either patient.

The author's conclusions are that peri-rectal gummata are rare. The two cases reported are unique and of interest in that both were typical examples of peri-rectal gummata. In both cases the gumma was seen in its early or vascular phase. In one case it appeared 23 years after the initial lesion; in the other case it appeared three years following the syphilitic infection. Both gummata were painless to palpation and fluctuation was detected in both. An error of diagnosis in one case was responsible for the

incision and subsequent suppuration which followed. In the other case no incision was made and suppuration did not occur. No demonstrable rectal lesion could be discovered in either case. The induration in both cases disappeared rapidly under anti-syphilitic medication. No fistula resulted in either case.

"Anal and Rectal Growths of Benign or Doubtful Character."—By Dr. T. Chittenden Hill, of Boston, Mass.

Hill states that in a series of 3000 rectal cases previously reported there were 49 benign and 76 malignant growths of the rectum. The large majority of these tumors were characteristic and the differential diagnosis was easily made. A few malignant growths seen in an early stage, and some unusual benign types associated with ulceration, were of such a nature that the exact diagnosis was not easily determined.

The writer emphasized the fact that the operative measures to be employed differ radically in each of these conditions. An excision of the rectum is necessary for the malignant cases, a simple local excision is all that is required for the benign growths, where an incision and drainage will suffice for the abscesses and fistulae. Therefore, a doubtful case can not be treated as a breast case in which a complete amputation for a benign growth may be justified. In the case of the rectum there is not alone mutilation, but a high mortality and a serious impairment of function as well to be considered. Furthermore, the removal of a specimen of a suspected tumor is not now approved and this complicates the problem still more.

The histories of several cases which illustrate the doubtful nature of some border line conditions occasionally found in the rectum are cited. They tend to show that aside from benign growth, some of which have many of the characteristics of malignancy, there are certain abscesses which develop in the loose cellular tissue of the retrorectal and pelvi-rectal spaces which are even more suspicious. These indurated, irregular swellings bulging into the rectal ampullae at first resemble very closely the sensation imparted to the finger in malignancy. A little later they be-

come soft and fluctuation is perceptible when all doubt as to their nature is removed. The sinus from an old fistula occupying these same spaces is apt to be much more perplexing than an abscess. As the slow process goes on the rectal wall is crowded into the lumen of the bowel and assumes an irregular, indurated outline which is very suggestive of cancer. Other conditions of similar doubtful character, such as gummatous growths and tubercular ulceration are also discussed.

"Retrorectal Infections."—By Collier F. Martin, M.D., of Philadelphia, Pa.

Martin reviews the histories of sixty-seven cases. In addition to the infection of the retrorectal space many of the cases also had involved the pelvirectal and ischiorectal spaces. Some of the more chronic cases were complicated with stricture of the rectum and multiple fistulae.

Eighty-five per cent of the infections occurred in males. External traumatism was not a factor in this series of cases. The author holds that most of these infections originate from internal traumatism, associated with some condition which lowers the resistance of the individual to pyogenic infection.

Pulmonary tuberculosis appears to be most constant factor in thus lowering the resistance. Twenty-one per cent died from tuberculosis at varying periods, either after examination or operation.

Forty-three per cent of the cases are noted as having pulmonary tuberculosis more or less advanced.

Of the fifty-five cases operated upon, thirty-three were cured. These present sixty per cent of the operative cases, or nearly 50 per cent of the total number examined.

In nearly half of the cases the original abscesses had opened posteriorly, either between the sphincters or at the anorectal line. Pain was not a prominent symptom.

The methods of incision applicable to the various complicating conditions are briefly outlined.

The author lays great stress upon the seriousness of these infections, and upon the necessity of the prolonged watchful after-treatment.

While the prognosis as to both complete recovery of the local condition and the general health, as well as to the preservation of the sphincter control, should be guarded, careful after-treatment and prolonged observation will result in saving a large proportion of these really serious cases.

An abbreviated history of the findings in the entire sixty-seven cases is given.

"Hemorrhoids; Their Treatment."—By Dr. J. Rawson Pennington, of Chicago, Ill.

Dr. Pennington states that clinically hemorrhoids should be classified:

(1) According to their location.

(2) According to their structure.

According to their structure they are divided into (a) those containing fluid blood, (b) those containing clotted blood, (c) those containing both fluid and clotted blood, and (d) those consisting of "skin tabs" or folds of skin.

Most hemorrhoidal cases can be operated on under some form of local anesthesia. He operates on 90 per cent of his cases by blocking the field of operation. The cocaine is usually employed in the strength of from ¼ to ½ of 1 per cent. The quinine and urea in from ¼ of 1 to 1 per cent solution. Sometimes he combines the solutions, the cocaine being used for its immediate effect and the quinine and urea for prolonging the anesthesia.

During the past twenty years he has given a fair trial to a number of methods advocated which promised a reasonably good result, including the ligature, the clamp and cautery, Whitehead, injection, suturing and other methods which unite tissue in mass, and has come very definitely to the conclusion that by far the best way of treating this condition is by the excision or enucleation method.

The operative procedure should have for its object the removal of the cause of the tumefaction. The treatment for each type of hemorrhoid should be practically the same. This should consist in removing an ellipse from the tumor-like formation and in the case of the thrombotic pile turning out the clot, and in that of the internal variety the varicosity and allowing the blood to escape, and in the fleshy pile of dissecting out the excess of tissue.

"Hyperplastic Tuberculosis of the Colon."—By J. M. Frankenburger, M.D., of Kansas City, Mo.

The writer declared that this form of tuberculosis of the intestine differs from other forms of intestinal tuberculosis, inasmuch as it is amenable to operative interference. It is generally a local and primary lesion and is characterized by the formation of tumor masses composed of fibrous and tuberculous granulation tissue in the walls of the bowel. Primarily there is no involvement of the mucous membrane, but on account of the narrowing of the gut the irritation caused by the passage of feces may produce ulceration.

Symptoms are slight, constipation and diarrhoea sometimes alternating. Later the symptoms are those of gradually increasing intestinal obstruction. Differential diagnosis is between sarcoma, carcinoma, syphilis, and chronic appendicitis, with adhesions.

Treatment is purely surgical. If possible the entire growth should be removed, but failing in this a short circuiting operation should be performed to relieve the obstruction.

Two cases are reported with successful operations.

"Pseudo-Intestinal Stasis and Real Intestinal Stasis, Demonstrated Roentgenologically."—By Arthur F. Holding, M.D., of New York City, N. Y.

Attention is called to many anomalies of visceral position and progress of the bismuth meal that have been interpreted as pathologic, and which are really physiologic or anatomic anomalies

and completely compatible with health, laying especially stress upon the fact that the ileum enters the caecum normally at an angle, and unless associated with proximal distension, a diagnosis of Lane's kink is not justified.

He emphasized the point that delayed progress of the bismuth meal is not significant of obstruction unless it is more than six hours behind the normal schedule and associated with marked distension of the viscus proximal to the locus of obstruction. Proximal distension with obstruction to the bismuth column are the two cardinal diagnostic points of real intestinal stasis. Intestinal obstruction, due to tumors, is much easier to diagnose than intestinal stasis, because the defect in the bismuth shadow made by the tumor is more definite than that made by adhesions, veils, or membranes.

"Local Treatment of Anal Fissure."—By James A. Duncan, M. D., of Toledo, Ohio.

The writer describes a treatment for anal fissure which he has employed successfully for the past thirteen years. The fissure is brought into view by separating the folds, and the surface is lightly curretted, then thoroughly dried, and a drop of collodion applied. This takes only a moment or so. A recent ulceration requires but a single application. A sharp, stinging pain, lasting for only a few minutes is caused, and then the patient is left perfectly comfortable.

"Some Unusual Phases of Sigmoidoscopy."—By Ralph W. Jackson, M.D., of Fall River, Mass.

The diagnostic value of the sigmoidoscope has been the topic of much writing, and is increasingly appreciated by hospitals, but much less so by the profession and insufficiently in medical teaching. Explicit statements of its considerable therapeutic uses are not found in German, American or English literature. The instrument enhances the extent and accuracy of recto-sigmoidal therapeutics, and specifically it facilitates the use of certain other instruments, topical applications, the relief of high impaction, and

the treatment of stricture and many other lesions. Serious trauma from the sigmoidoscope is more liable to happen than some authorities admit, as illustrated by three cases of intestinal perforation cited from the German. Two personal cases are detailed, where the patients were in serious condition from occlusion of the bowel, but were relieved and saved by sigmoidoscopy done with diagnostic intent only. Pelvic visceroptosis, hypermobility of the sigmoid, and the fixed and open rectal ampulla beneath predispose to invaginations and angulations which are fairly frequent in mild and chronic form, and are potentially dangerous as a source of acute obstruction. Sigmoidoscopy, properly conducted, empties the pelvis by gravity (due to the position assumed by intelligent introduction of the instrument and by the air pressure admitted through it, and therefore tends to undo such intestinal malpositions. The occlusion in the two cases related was unexpectedly relieved, and doubtless in this way. Greater prevalence in the use of the sigmoidoscope would bring to light a field for deliberate therapeutic use of the instrument along these lines.

"Crude and Careless Diagnostic Methods, and Results of Same, in Some Recto-Colonic Conditions."—By John L. Jelks, M. D., of Memphis, Tenn.

The author criticises the busy doctor and surgeon who too hastily yields to a conclusion and treats recto-colonic diseases without sufficient investigation to warrant or obtain a correct diagnosis.

Reference is made to cases operated on for appendicitis, which disease may be an extension of an infection and inflammation originating in the rectum or colon.

Cases are cited to show the frequency and at all times the liability of mistaking a condition for an infection or ulceration of the colon, specific in character, when a coloptosis or pericolic membranes, or both, were the true etiologic factors. Stress is laid on the importance of urinalysis, microscopic examination and the X-ray in recto-colonic cases.

A harder nodular calcareous degeneration of the outer zone of the mamma has been observed as a sequence of coloptosis and defective drainage. In another case, in which was found a cecum cradled in pericolic membranes, and a coloptosis, a duodenal ulcer was diagnosticated. In this case the urinalysis, the history, and general toxic appearance of the patient, pointed to true etiology.

Case reports are given in which diarrhea was the dominant symptom, though impactions, pericolic membranes, and ptosis were the true etiology.

The author calls attention to his prior reference to, and work of establishing the importance of conserving the ilio-cecal valve; also to the syphonage of a ptosed colon after short circuiting operations, which he accomplished by a second anastomosis between the blind colon and the sigmoid or rectum below the first anastomosis.

Importance is claimed for a microscopic examination of the intestinal contents of patients who suffer from attacks of appendicitis, and of the contents of the removed appendix; and the author insists that in the event that pathogenic amebae are found appendico-cecostomy should be performed instead of appendectomy.

The author refers to his observation of quite marked congestion of blood in the visceral vessels themselves in these cases of ptosis and defective intestinal drainage.

The author refers to the frequency with which he encounters cases of inoperable cancers of the rectum and intestines, the neglect of which is most often due to the fear of examination of those suffering with symptoms in the region referred to.

Reference is made to the operation of appendico-cecostomy as being practically free of danger to life. In his opinion this operation would save almost every life that is today caused by the ravages of amebic colitis.

"Abscess Originating in a Pilo-Nidal Sinus."—By Louis J. Krouse, M.D., of Cincinnati, Ohio.

The writer states that a pilo-nidal sinus is a congenital defect due to a faulty development of the foetus. It is usually located in the median line over the coccyx or the sacrum. Inflammation developing in the sinus is followed by burrowing of pus into the neighboring tissue. Inflammation of this sinus must be differentiated from necrosis affecting the sacral or coccygeal bone; from abscess originating in the sebaceous gland of this region; and from true fistula-in-ano. The treatment consists in the complete obliteration of the walls of the sinus.

"Abnormalities of the Colon, as Seen with the Roentgen Ray: Lantern Slide Demonstration."—By W. I. LeFevre, M.D., of Cleveland, Ohio.

The entire alimentary tract can now be successfully examined with the X-ray, some parts more readily and successfully than others, according to the degree of satisfaction arranging themselves in the following order: Colon, stomach, oesophagus, small intestine. Two methods of examination are used. First, Roentgenoscopy, which is the examination with the fluoroscope. Second, Roentgenography, the making of X-ray plates. The colon is also accessible from either end, that is, it can be examined by following the bismuth meal through from the stomach, or by giving an opaque enema of barium sulphate. In the former method the motor phenomena of the colon can be observed, in the latter the size, position and contour can be seen.

The action of atropin, adrenalin, pilocarpin and physostigmine as affecting the action of the bowel is briefly discussed.

The normal colon is described in detail, with radiographs showing different types. Many vary from the "ideal" type and still are normal for that individual.

Abnormalities of the colon may be produced by congenital defects, disease or injury to the bowel proper, from pressure, constriction or relaxation of other organs in close proximity. Colop-

tosis, owing to its frequency and importance is first discussed with radiographs showing these conditions. Other abnormalities consist of stenosis, malignant growths, tuberculosis, kinks, twisting ,hernias, diverticulae, and megacolon or Hirschprung's disease. All these conditions can be recognized by aid of the X-ray.

"Some Problems Before the American Proctologic Society."—By J. A. MacMillan, of Detroit, Mich.

The writer states that—(1) during the past decade proctology has come to include diseases of the colon, and that the extension is beneficial inasmuch as it encourages and provides for a better diagnosis, and for a more thorough search after etiology. (2) The effort should be made by the American Proctologic Society to standardize some of well tried methods of treatment which have been proven effective and reliable. That on the other hand there are certain procedures in common use that are faulty and pernicious, and that it should be the aim of the Society to begin a campaign of education against these. (3) That in regard to rectal cancer he recommends that statistics from the members of the society be collected annually, and utilized to ascertain the prevalence, and location of the disease, together with the extent of surgical interference or noninterference, kind of operation, and subsequent results.

The writer recommends that a cancer committee be appointed to take charge of this work.

Extracts from Home and Foreign Journals.

SURGICAL

Radium in Cancer.

The papers on radium therapy in this and recent numbers of The Journal, in addition to being instructive in themselves, are indicative of the interest in the subject at the present time. Radium therapy is going through the period of enthusiasm that Roentgen-ray therapy experienced ten years ago. This is perhaps inevitable, and after it the method will doubtless settle into its true place in therapeutics. It is not a new discovery that radium has interesting and useful possibilities. That was shown by Wickham and others several years ago. Indeed, we know enough from our experience now to predict with considerable assurance the extent of these possibilities. Radium is useful in numerous dermatoses; and, passing to the larger subject of cancer, it is indisputable that radium can be used successfully to destroy certain localized malignant growths, that is, growths on the surface whose entire extent can be sufficiently exposed to its energy. Extensive growths involving deep structures and disseminated growths are beyond its control, and there is no reason to believe that they will ever be brought within its control, for all experience with radium and the Roentgen rays has shown that these agents are useful in malignant growths only so far as they destroy the cancerous tissue. In fact, there is every reason to believe that the extent and the limitations of therapeutic usefulness of the two agents are essentially the same, as are, indeed, the actinic energies of each. We have, then, a considerable experience on which to base our estimate of the usefulness of radium therapy, and from this experience there is no justification for the promise of relief in extensive cancer from the use of radium, or for the hope that with large quantities of radium we would be

much nearer the solution of the problem of the cure of cancer in general than we are now. Radium has a useful therapeutic field, and it would be unfortunate for its therapeutic reputation to be damaged by exaggeration or injudicious enthusiasm.—*The Jour. of the American Med. Asso.*

Present Status of Joint Diseases and Best Method of Treatment.

Diseases of a joint is due in all cases to a secondary infection which reaches it through the blood, except in those cases due to direct injury of the joint. The infection is pyemic, tuberculous, or syphilitic. In the chronic polyarticular cases of arthritis the etiology has not yet been fully established.

The stereoscopic radiograph is a very valuable aid in establishing a differential diagnosis.

Cold abscesses should not be opened and drained with a tube, as secondary infection follows and produces serious, if not fatal, results. They should be aspirated with a trocar and then injected with some such substance as bismuth paste. If secondary infection should occur in spite of this treatment, Beck advises the use of his bismuth paste which he believes will cure at least 50 per cent of these apparently hopeless cases.

The Rollier heliotherapy will also cure a large percentage of tuberculosis bone and join lesions, even in the presence of open sinuses.

Likewise massive doses of the X-rays have been effective of cure in the hands of Baish, Iselin, Schede and others.

Garre has reported a collection of over a thousand cases of tuberculosis treated surgically in various European climes, and shows that operative procedures give a very high mortality compared with conservative methods of treatment.—*Pediatrics.*

Osteoarthritis of the Hip.

R. L. J. Llewellyn and A. B. Jones are convinced that careful physical examination supplemented by a discriminating analysis of the subjective symptoms will enable one to diagnose the oncoming of an osteoarthritis even prior to the formation of bony outgrowths. The early symptoms consist of pain (local and referred), tenderness of hip, alterations in attitude and gait, with limitation of mobility. Like tuberculosis coxitis the pains of osteoarthritis in this joint may either be localized to the hip region or referred along one or all of the nerve trunks from which the articulation derives branches. Quite in the initial stages a feeling of pain, or rather of painful stiffness, is felt in the joint itself. Sensitiveness to palpation of the capsule of the hip is a very common sign, but needs careful examination for its detection. Referred pains at their onset are more often than not dismissed as examples of pure sciatic or crural neuralgia, and regarded as of gouty and rheumatic nature the unhappy victim for years roams from spa to spa in search of relief. The chief peculiarity of these pains is not so much their intensity as the extraordinary length of the period they endure. Thus patients with well-marked malum coaxe always assert that they have not only for years, but for two or even three decades suffered with these pains. Almost invariably these subjects suffer at the same time with pain in the loins, which, of course, enhances the liability to confusion with scatica —a condition so commonly associated with lumbago. In the initial stages no change in gait and attitude can be detected save in the temporary limping that follows the occasional incarceration of the enlarged synovial villi. But with their growth and the advancing involvement of the membrane the intra-articular irritation produced gives rise to spasm of the related muscle, and this is malposition through slight flexion of the hip-joint. Relative fixity of the joint is, of course, the sign of chief diagnostic importance, and even in the very earliest stages there is present some limitation in the arc of motion in the hip. The presence of flexion contracture is of prime value as an indication of the articu-

lar site of the affection, but there are always present also further restrictions of movement. The diagnosis of osteoarthritis of the hip in its terminal stages presents no difficulty, but unfortunately at this period in its life history treatment is of little avail.—*Medical Record.*

MEDICAL

The Value of Skimmed Milk and Its Dilutions in Fever.

L. Fischer believes that in pneumonia one should give no more than one-half of the quantity of milk formerly given. The frequency of feeding should also be reduced. Solid food should be prohibited during an acute febrile attack, regardless of the diagnosis, so that eggs, meat, vegetables, and bread should be prohibited. On the other hand gruels may be permitted in many diseases. Thus a farina or oatmeal gruel, or a barley gruel made with diluted milk is well borne and may be ordered. Fruit juices, such as orange juice and pineapple juice, are grateful and quench thirst. One of the best remedies to give is water for its antipyretic and laxative effects, and because it stimulates the kidneys. The tolerance for carbohydrates during fever is limited and in many cases they are contraindicated. Fat in the form of butter or cream is also contraindicated. Skimmed milk should be diluted with an equal quantity of water. By this method of feeding there is given a very low percentage of sugar and casein and practically no fat.—*Medical Record.*

Kubisagra of Gerlier's Disease.

L. P. Couchoud, Rev. de Med., April, 1914. This occurs only on the Franco-Swiss frontier and in the north of Japan. It was described independently by Gerlier and Nakano in 1844. It is a summer disease, occurring paroxysmally, usually while the patient is at work. There is weakness of the hands and arms, severe

pain in the cervical region, the head falls forward and the eyelids droop. The gait is reeling and the patient may fall. There may be transitory failure of vision or diplopia. The cat is subject to the disease, and Couchoud has used it in experimental work. He claims to have demonstrated a staphylococcus, gram-negative, not liquifying gelatin, feebly agglutinated by the serum of patients and inducing the disease in cats, though not pathogenic to mice or frogs. He terms it the Micrococcus paralyticans. The prognosis of the disease is good, attacks ceasing with the advent of cool weather. (Note: Similar symptoms occur commonly from overwork, mild isolation, especially in poorly nourished subjects with mild sepsis from cuts and scratches or intestinal saprophytosis. Staphylococci can be "isolated" from almost everyone. Unless the bacteriologic identification is absolute, we are sceptic as to the regional limitation of a specific disease to two widely different localities, from which emigration has occurred extensively.—*Buffalo Med. Journal.*

Quinin Treatment of Rabies.

The quinin treatment was tested by Summing against fixed virus, as well as, against street virus. The former was a six-day virus, while the latter killed rabbits in about ten days, and guinea-pigs in eight days. The virus was given intracranially; the bisulphate of quinin was used in all experiments, the injections being intraperitoneal. The results were negative. The experiments were controlled both as to the infectivity of the virus and as to the absence, for the most part, of untoward symptoms from the quinin treatment. The dose of virus in most of the tests was not much larger than the smallest infecting dose. This amount of the virus is approximately 1-200,000 part of the total virus in the brain and spinal cord of a rabbit at the beginning of the paralytic stage. Inasmuch as the quinin failed as a preventive measure against extremely small doses of virus in actual tests, Cumming asks whether it can not reasonably be assumed that this method of treatment is of no curative value in cases of hydrophobia mani-

festing symptoms in which the amount of virus would be many thousand times greater? In the absence of protection by quinin against small doses of virus, even when a series of daily injection of rabic virus, Cumming says, we can not expect favorable results from quinin after symptoms of hydrophobia have developed.—*The Journal of the American Medical Association.*

Graft of Monkey's Thyroid Improves Myxedema.

Voronoff's patient was a boy of 14 who had developed myxedema after measles at the age of 8. The graft of the right lobe of the thyroid with its parathyroids was taken from a large monkey—a baboon—and implanted in the neck of the boy. It was embedded in a vascular region and was sutured to the surrounding tissue in order to promote adhesions and formation of new vessels. Voronoff states that during the six months since, the gradual improvement in both the physical and mental condition has been striking. The boy had formerly been apathetic and stupid, the skin scaling off, the nose and lips enlarged; all this has retrogressed and the features show nothing abnormal while from his former apathy in school the boy has become lively and unruly.—*The Jour. of the Amer. Med. Asso.*

On the Effect of Scarlet Red in the Treatment of Gastric and Duodenal Ulcer.

Fridenwald and Leitz (Monthly Cyclopedia) note that Davis has suggested the use of scarlet red in the treatment of ulcer of the stomach, having proved its usefulness experimentally in animals. The powder is reddish-brown in color, giving scarlet red in oil solutions. It is tasteless, neutral to litmus, in 1 per cent oil solution, insoluble in water and urine, even after boiling. It is soluble in alcohol, ether and chloroform, olive oil, fats, fatty oils, turpentine, warmed petrolatum, and paraffin. One gramme of

finely divided powder, heated gradually in 100 c.c. of olive oil to 200, remained in solution for two days or more at ordinary room temperature. Approximately a 2 per cent solution can be made, but the scarlet red does not stay in solution for any length of time, and tends to precipitate at once on cooling. Gastric juice, experimentally ,has no effect on the scarlet red. Agar and bouillon cultures give abundant growths with staphylococcus and colon bacillus, despite the addition of 1 per cent solution of scarlet red. When given by the mouth it is a fat-selecting vital stain. In the course of months the stain is gradually eliminated. Subcutaneous and intraperitoneal injections stain only the fat in actual contact with the scarlet red solution.

Scarlet red may be administered in doses of 15 to 20 grains three or four times daily without the slightest toxic effect, provided a pure preparation be employed. It is best given in 7½-grain konseals, two of which may be taken three or four times daily before meals. It may, however, be administered in much larger doses and only after very large continuous doses can the odor of camphor be detected in the urine. There was not the faintest toxic symptom during its employment in over 100 patients. Of thirty-seven cases treated by the scarlet red, these being instances in which the result of the rest cure was unsatisfactory, or ambulatory cases which remained unbenefitted by the treatment, the great majority were cured. The dosage per diem varied from 40 to 50 grains. While at is held that the drug can not replace the usual forms of treatment, it is urged that when it is administered in conjunction with them it frequently renders the cure more effective. Its use need not interfere in any way with the administration of other remedies, such as the alkalies or belladonna, when indicated, and, in fact, the effect of the combination is at times most beneficial.—*The Therapeutic Gazette.*

Enuresis—Nocturnal.

Dr. John Ruhrah, in the Amer. Jour. Med. Sciences, says: Among the more interesting of newer suggestions as to treatment

are the results of Williams in treating these cases by the use of desiccated thyroid. His cases had subnormal temperature and evidence of thyroid insufficiency, and he obtained wonderfully satisfactory results in all except one case, and in this case the child did not have a subnormal temperature. Williams gave one-half grain of the dried thyroid twice daily to children between two and six years of age and this may be increased for older children. The increase in dosage should be made slowly as directly opposite effects are occasionally induced by overdose. Ruhrah has used this method and in a small proportion of cases in which there were more or less marked signs of thyroid insufficiency, the results were quite remarkable. These were children with adenoids and enlarged tonsils, or in some cases, children in whom the adenoids or tonsils had been recently removed. In his cases the effect was obtained promptly or not at all. In every case in which a favorable result was obtained, a marked difference was noticed after the administration of one or two doses of the drug, and in all cases within a week. Another remarkable observation coinciding with that of Williams' is that the undersized children gained weight rapidly. When there is no other indication for treatment he has found the use of atropin to give better results in a great number of cases than any other one thing, and to be of any service it must be given in full doses. In nocturnal cases a dose at five o'clock and at bedtime is all that is required. In cases occurring both during the day and night the drug is advised every three hours. He usually prescribed one grain of atropin sulphate in two ounces of water, each drop containing about 1-1000 grain, and usually as many drops will be required as the child is years old. The proper method of dosage, however, is to start with one or two drops, increasing each dose one drop at a time until flushing of the face and neck occurs some twenty minutes after taking the drug. The dose should then be diminished one drop, and this amount continued until the child has ceased urinating at night and for at least two weeks later, when the drug may be dropped gradually, diminishing a drop at a time until one drop is reached when it may be stopped.—*Pediatrics.*

Hemorrhage from Throat in a Bleeder.

A woman was brought to me yesterday, from Corbin, Ky., with the statement that, about a week ago, she had had what was thought to be quinsy, which had ruptured, accompanied by considerable hemorrhage, and ever since that time she had been having profuse hemorrhages from the throt. I was told that she had been losing from a pint to a quart of blood every day for a week, and she was beginning to show the effects of it. When she was brought to my office I examined her, and found that on the left side she had quite a large tonsil, and just in front of the tonsil, on the anterior pillar, there was an opening from which blood was oozing. I cocainized the throat, introduced a pair of forceps and pulled out a strip of one-inch gauze nearly two feet in length, which had been packed in there by her physician to stop the flow of blood. I cleaned out the clots and then she began to bleed, and this hemorrhage continued in spite of everything I could do. I cauterized it, applied adrenalin gauze and peroxide of hydrogen gauze, and today I gave her 10 c.c. of horse serum. Yesterday I put her on calcium chloride. She has a baby about ten weeks old which is nursing. Evidently she is a bleeder. No blood examination has been made. The opening is in the anterior pillar nearly opposite the supra-trianular fossa.

P. S.—The serum had a magic effect, the hemorrhage ceased and she had no more bleeding.—*The Louisville Monthly Journal of Medicine and Surgery.*

Typhoid Vaccine Therapy.

In a study of the vaccine therapy of typhoid fever Albert A. Hornor, of Boston (Boston Med. and Sur. Jour.), in one hundred and thirty-five cases, comparing forty cases where vaccines were administered with ninety-five cases where vaccines were not used, gives some very suggestive figures. The one hundred and thirty-

five cases were treated alike save for the use of vaccines. The average duration of fever in uncomplicated cases not receiving vaccines was 23.08 days. The percentage of cases showing complications were: inoculated, 55; uninoculated, 50½; all cases, 51. The percentages of mortality were: of vaccinated cases, 10; of unvaccinated cases, 11½; of all cases, 11 1-10.

The duration of fever in uncomplicated cases was approximately the same where the cases did or did not receive vaccines. Defervescence in the uncomplicated cases began usually on the third day after admission, no matter whether vaccines were or were not administered. A more detailed study of the incidence and of the character of complications shows relapses occurring in 20 per cent of inoculated cases in contrast to 11.5 per cent of uninoculated cases; recrudescence in 17.5 per cent of inoculated cases as against 28.4 per cent of uninoculated cases; other complications in 37.5 per cent of inoculated cases compared with 21 per cent of uninoculated cases. In brief, the incidence of recrudescence was much less in the vaccinated than in the unvaccinated cases, while relapses and other complications were much more frequent in those vaccinated than in those unvaccinated. The latter class of complications includes hemorrhage, perforation, phlebitis, pneumonia, parotitis, tonsillitis, osteomyelitis, acute hallucinosis, Vincent's angina, and decubitus.

Analyzing the causes of the four deaths occurrng among cases treated with vaccines, we find the first death due to an intestinal perforation, after the fifth inoculation of vaccine and after patient had received a total of 150 million dead bacilli; the second death was due to septic parotitis developing during a relapse which began after three weeks without fever and after patient had received 880 million killed bacteria; the third death was due to an intestinal hemorrhage occurring on eighteenth day after patient's admission to the hospital and after he had received 530 million dead organisms; the fourth death was due to bronchopneumonia on patient's twenty-first day in hospital and after he had received 580 million killed typhoid bacilli. These deaths were obviously not due to complications extraneous to typhoid fever.

The deaths occurring among 95 cases not inoculated with dead typhoid bacilli were as follows: 4 pneumonia, 2 hemorrhage, 3 severity of the disease, 1 perforation, 1 alcoholism.—*The Lancet-Clinic.*

OBSTETRICAL

Treatment of Eclampsia on Basis of Retention of Salt.

Christiani insists on the importance of the retention of salt as an element for the prognosis in eclampsia. In a case reported this, in connection with the other symptoms, compelled immediate cesarean section, saving both mother and child in an extremely severe case of eclampsia. Notwithstanding venesection and infusion the amount of urine fell off to 135 c.c.; the albumin had increased from traces to 12 per thousand, while there was only 0.4 c.c. of salt to the liter. The morning after the operation the albumin had dropped to 2 per thousand while the salt had risen to 2 c.c. per liter. In some other typical cases cited the severe symptoms appeared and disappeared parallel to the drop and rise of the salt curve in the urine. His experience has been that retention of salt occurs with the uncontrollable vomiting of pregnancy and even before there are signs of albuminuria. Its importance as a guide to treatment in this case is obvious.—*The Journal of the American Medical Association.*

Anesthesia of the Uterus.

Kraus implies that local anesthesia is but a stepmother to the uterus. The first attempts were directed to the cervix and parametria, while Sellheim obtained superior results with conduction anesthesia. The author believes he has hade a further advance by employing pressure anesthesia, so well known to the dentists. The stretching of the cervix is a painful operation. The operator inserts into the cervix rods of cocoa butter, which contain the proper content of novocain—suprarenin. These can be pressed

quite up to the fundus, after which they melt and the entire mucosa is rendered anesthetic. Hegar's dilator is then introduced. To improve the asepsis the latter was coated with melted cocoa butter containing the anesthetic and the whole, after the butter had hardened, pushed into the cervix. The first results were imperfect and instead of cocoa butter a syrup containing the anesthetics was substituted. The syrup was boiled and allowed to congeal on the dilator. Thus far asepsis and anesthesia have been assured. The author has operated upon 24 cases of endometritis (curettage) with the above anesthesia, with satisfactory results.—*Medical Record.*

Pituitary Extract.

George L. Brodhead, of New York (New York Med. Jour.), in an address before the Medical Association of the Greater City of New York, on the use of the pituitary extract in obstetrics, declares that the extract, when used intelligently, in the absence of disproportion and with good cervical dilatation, is a very valuable and a comparatively safe therapeutic agent. The fetal heart must be carefully watched, and chloroform should be at hand to relieve violent contractions, with the forceps ready for instant use. The extract gives satisfactory results, as a rule, and is well worth a trial in properly selected cases. He has usually given one c. c. as the initial dose, repeating every twenty minutes, if necessary, until three doses have been given. If three injections fail, he discontinues the use of the extract.

In Cæsarean section, he has injected the extract immediately before making the incision, with excellent results. The uterus contracts well and the operation is made easier because of the comparative absence of hemorrhage.

For post partum hemorrhage he has never relied upon the extract alone, always combining it with ergot. He has no reason to doubt, however, that the quick action which is obtained in the use of the extract is of undoubted value in the treatment of this variety of hemorrhage.—*The Lancet-Clinic.*

Successful Treatment of Tetanus Neonatorum.

The undoubted power of magnesium sulphate as used by intraspinous injections over the convulsions of tetanus is offset by the fact that death may still occur from severe complications, which may well be ascribed in part to the paralyzing action of the drug. Attempts are naturally being made to neutralize the overaction of the magnesium. Before the Pedriatic Section of the Verein für innere Medizin und Kinderheilkunde, Berlin, which met last July (*Berliner klinische Wochenschrift*, July 27) Falk reported three cases of tetanus neonatorum, seen within four months, in all of which recovery ensued. The solution of magnesium sulphate employed varied from 8 to 25 per cent. To offset the paralyzing action chlorate of calcium was injected. In discussion Finkelstein added that the duration of the disease was not diminished, but the treatment certainly prevented the violent convulsions which often terminate life suddenly and, morover, gave opportunity to push nourishment while the jaws were relaxed. Falk stated, that feeding must be done early, and that one must be sure that the magnesium has not caused deglutition paralysis. Late feeding might set up spasms.—*Medical Record.*

Artificial Sex Control of Pigeons.

That artificial control of sex has passed the experimental stage was the statement made by Dr. Oscar Riddle, in charge of the evolution station of the Carnegie Institute, in addressing the American Academy of Medicine at Atlantic City. "The station is propagating sexes at will with pigeons and doves," said Riddle. "The sex of frogs and toads is settled by manipulation and that of cattle to some extent can be regulated through fixing the mating period." As to human beings, Dr. Riddle said the extent of sex control would depend upon the success now being attained by scientific experiments with mammals and he would not be surprised if eventual success was achieved.—*The Medical Herald.*

Treatment of Cancer of the Uterus.

From 1896 until December 31, 1913, Wilson operated on 956 cases of uterine cancer. Of these, in 67 the disease affected the uterine body. Among the 67, 15 vaginal hysterectomies with no mortality, and 29 abdominal hysterectomies with 3 deaths, were performed. Until the end of 1913 there were 529 cases of cancer of the cervix uteri. These can be conveniently divided into two groups according as operation by the vaginal or the abdominal route was the method of choice. In the first period, lasting until the end of 1905, there were 246 cases of which 37 were operated on by the vaginal method with one death, and 7 by the abdominal route with 6 deaths. In the second period, from January 1, 1906, to December 31, 1913, 283 cases were seen, among whom 20 were operated on by the vaginal route with no deaths and 72 by the abdominal with 8 deaths. The total immediate mortality of the vaginal method has been 57 cases with one death, or less than 2 per cent; and of the abdominal, 70 operations with 14 deaths or 17.7 per cent. The great majority of abdominal hysterectomies were performed by Wertheim's method. The ratio of operability has steadily increased; and in the years 1896 to 1899 it was 14 per cent; in the last four years it has been more than 14 per cent.

The total five years results up to June 30, 1909, have been investigated and show that, with an increased operable ratio and the adoption of the abdominal method of operation the absolute curability of Wilson's cases have risen from 5.5 to 10.2 per cent. Of the patients surviving operation 16 of 51=31 per cent of the vaginal, and 10 of 23=43 per cent of the abdominal, remained well and free from recurrence for five years and upward.—*The Jour. of the Am. Med. Asso.*

Editorial

PUBLISHER'S NOTICE—The Journal is published in monthly numbers of 48 pages at $1.00 a year, to be always paid in advance.

All bills for advertisements to be paid quarterly, after the first insertion of the quarter.

Business communications, remittances by mail, either by money order, draft, or registered letter, should be addressed to the Business manager, C. S. Briggs, M. D. corner Summer and Union Streets, Nashville, Tenn.

All communications for the Journal, books for review, exchanges, etc., should be addressed to the Editor.

A FEDERAL DEPARTMENT OF HEALTH.

We wish to call the attention of our readers to the fact that now is an opportune time for every member of the profession, every county, state, sectional and national society, in fact every unit of force in the profession to get together and fight hard for the creation of the much needed and long desired Department of Public Health. That there will eventually be such a department, few of us doubt but that it will result soon is not assured by any means.

Many of us thought this department would be created during the administration of Roosevelt, and after the bill was defeated under Roosevelt our hopes were strong that Taft and his party would pass the bill. However our most sanguine hopes were destroyed and any hopes we may now entertain are doomed to the same disappointing termination unless every member of the profession uses all his influence, both directly and indirectly, with the Congressmen in his district.

Now that Col. Gorgas has completed the Panama Canal, the most wonderful achievement of medical science of all ages, the time is most opportune to have Congress create this badly needed department and to honor Col. Gorgas by placing him at its head.

That our government has no such department is not only a disgrace to the nation but also a reflection upon Congress. It shows that our Congressmen have not grasped the fact that the health

of a nation is its strongest asset in times of peace as well as in times of war and that such a department would mean a financial saving to the nation of millions of dollars. That the medical profession needs the aid of a Federal Department of Health in its fight against disease is easily appreciated when we consider that competent statisticians estimate that the annual death rate could be cut down by 500,000, that millions of dollars could be saved were such a department created. Monuments to members of our profession are few and far between and yet there are many physicians who are willing to sacrifice their lives to advance the science of medicine and promote the welfare of the human race. Let us hope and strive for a Federal Department of Health as a monument to American science in general and to the great sanatarian, Col. Gorgas, in particular.

"Twilight Sleep."

(When you hear about "Twilight Sleep" think about H.-M-C (Abbott).

Two lay magazines, with a combined circulation of more than two million copies, are conducting one of the most aggressive campaigns of publicity ever undertaken in this country. These periodicals have got hold of the fact that it is possible to make childbirth painless, through the use of scopolamine (hyoscine) and morphine, and they are spreading this knowledge broadcast. Within six months there will not be an intelligent woman in America who doesn't know about this method. When these women learn that it really is possible to escape the terrible pangs of labor, and that you can help them to take advantage of it in their homes, they will be clamoring at your door for the "twilight sleep" when the time approaches for the baby to come.

"What is this wonder-working thing, this Twilight Sleep?" asks the Ladies World; and it answers, "Nothing in the world but the skillful use of anesthetics to produce that very fine balance between the states of consciousness and unconsciousness where the patient can not recollect immediate sensations, such as pain,

yet is in full possession of her muscular power and her will to help. These are the ideal conditions for a safe, normal, painless birth. They have been obtained by the great physicians of Germany. They can be obtained by the equally skillful doctors of America. They can be obtained in your town and mine, in the childless home of that terrified young husband, in your home and your daughter's home—everywhere."

All that can be accomplished with scopolamine and morphine, at Freiburg or elsewhere, can be accomplished—is being accomplished in thousands of cases—with H-M-C (Abbott).

The "Twilight Sleep" is available for you in your town in your practice. In H-M-C (Abbott) are provided the necessary drugs, in proper combination, to meet most obstetrical conditions. The exact method of using it is described in a little booklet, which (with prices (The Abbott Alkaloidal Company, Ravenswood, Chicago, will send on request.

Better order your supply of H-M-C at once. You may have a case requiring its use this very day. Drug prices are soaring, and the price of H-M-C, already advanced under stress of the European war, may be higher at any time.

Examination of Candidates for Assistant Surgeon.

Treasury Department,
United States Public Health Service.
Washington, August 25, 1914.

Boards of commissioned officers will be convened to meet at the Bureau of Public Health Service, 3 B Street, SE., Washington, D. C., and at the Marine Hospitals of Boston, Mass., Stapleton, N. Y., Chicago, Ill., St. Louis, Mo., New Orleans, La., and San Francisco, Cal., on Monday, October 19, 1914 at 10 o'clock a. m., for the purpose of examining candidates for admission to the grade of assistant surgeon in the Public Health Service, when application for examination at these stations are received in the Bureau.

Candidates must be between 23 and 32 years of age, graduates of a reputable medical college, and must furnish testimonials from two responsible persons as to their professional and moral character. Service in hospitals for the insane or experience in the detection of mental diseases will be considered and credit given in the examination. Candidates must have had one year's hospital experience or two year's professional work.

Candidates must be not less than 5 feet, 4 inches, nor more than 6 feet 2 inches ,n height.

The following is the usual order of the examinations: 1, Physical; 2, Oral; 3, Written; 4, Clinical.

In addition to the physical examination, candidates are required to certify that they believe themselves free from any ailment which would disqualify them for service in any climate and that they will serve wherexer assigned to duty.

The examinations are chiefly in writing, and begin with a short autobiography of the candidate. The remainder of the written exercise consists of examination in the various branches of medicine, surgery, and hygiene.

The oral examination includes subjects of preliminary education, history, literature, and natural sciences.

The clinical examination is conducted at a hospital.

The examination usually covers a period of about ten days.

Successful candidates will be numbered according to their attainments on examination, and will be commissioned in the same order. They will receive early appointments.

After four years' service, assistant surgeons are entitled to examination for promotion to the grade of passed assistant surgeon.

Assistant surgeons receive $2,000, passed assistant surgeons $2,400, surgeons, $3,000, senior surgeons, $3,500, and assistant surgeon generals, $4,000 a year. When quarters are not provided, commutation at the rate of $30, $40, and $50 a month, according to the grade, is allowed.

All grades receive longevity pay, 10 per cent in addition to the regular salary for every five years up to 40 per cent after twenty years' service.

The tenure of office is permanent. Officers traveling under orders are allowed actual expenses.

For invitation to appear before the board of examiners, address "Surgeon General, Public Health Service, Washington, D. C."

Special Anesthesia Supplement.

Recent years have been marked by some important contributions to the theory and, especially to the practice of surgical anesthesia, but there has lacked what is now quite needed for the further scientific development of this alongside the other departments of surgery—a journalistic medium and editorial mouthpiece.

The American Journal of Surgery will be expanded to meet this need. Beginning with the October issue and quarterly thereafter, this journal will publish a 32-page supplement devoted exclusively to Anesthesia and Analgesia.

This supplement will be a complete journal within a journal containing editorials and communications, abstracts, transactions of Societies and book reviews.

The supplement has been adopted as the official organ of the American Association of Anesthetists and the Scottish Society of Anesthetists and it will also publish the transactions of other like societies.

The editor of this supplement will be Dr. F. Hoeffer McMechan of Cincinnati, one of the founders of the American Association of Anesthetists and a charter member of the New York Society of Anesthetists.

He will be assisted by a staff of well known specialists in Anesthesia, among whom we would mention:

Dr. James T. Gwathmey, New York.

Dr. Willis D. Gatch, Indianapolis, Ind.

Dr. William Harper De Ford, Des Moines, Ia.

Dr. Charles K. Teter, Cleveland, Ohio.
Dr. E. I. McKesson, Toledo, Ohio.
Dr. Isabella C. Herb, Chicago, Ill.
Dr. Yandel Henderson of Yale University.

"The Travel Study Club of American Physicians, which made a successful study tour of Europe last year, has completed the plans for its 1915 study tour to the A. M. A. meeting in San Francisco, Honolulu, Japan, the Philippines, China, with optional return via Siberia and Europe (war permitting) or via Canada. This being the first party of American physicians ever visiting the far East and the new possessions of the United States, a most cordial welcome can be expected by authorities and members of the medical profession. The Travel Study Club would like to make its enterprises as representative as possible, and asks all those interested to communicate with the Secretary, Dr. Richard Kovacs, 236 East 69th Street, New York."

Obituary

Dr. William L. Dudley.

Dr. William L. Dudley, who, until a few years ago was dean of the Medical Department of Vanderbilt University, died suddenly September 8. Though Dr. Dudley had been in poor health for several years his sudden death came as a surprise to his many friends. He was born in Covington, Ky., in 1859 and graduated from the University of Cincinnati in 1880. He was a chemist by profession. He was professor of Chemistry at the Williams Medical College at one time; later he was professor of Chemistry at Vanderbilt. He was not only a good chemist but also a great teacher. His wide knowledge and thorough grasp of chemistry and allied branches of science was an inspiration to those who attended his lectures, and his personality was such that he was beloved by all who came in contact with him. His loss will be keenly felt not only by Vanderbilt University but by the entire community.

Reviews and Book Notices

"Progressive Medicine"—A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics, Materia Medica, and Diagnosis in the Jefferson Medical College, Philadelphia; Physician to the Jefferson Medical College Hospital; One Time Clinical Professor of Diseases of Children in the University of Pennsylvania; Member of the Association of American Physicians, Etc. Assisted by Leighton F. Appleman, M.D., Instructor in Therapeutics, Jefferson Medical College, Philadelphia; Ophthalmologist to the Frederick Douglass Memorial Hospital; Instructor in Ophthalmology, Philadelphia Polyclinic Hospital and College for Graduates in Medicine. Vol. III. September, 1914. Diseases of the Thorax and Its Viscera, including the Heart, Lungs and Blood Vessels—Dermatology and Syphilis—Obstetrics—Diseases of the Nervous System. Lea & Febiger, Philadelphia and New York, 1914.

Our thanks are due the publishers for this interesting volume of Progressive Medicine. Of all modern publications issued in quarterly form this is decidedly the most substantially valuable. It contains the cream of recent advances and discoveries in readily accessible form from contributors who are well known in their several departments as authoritative. The contributors to this number are Edw. P. Davis, M.D., William Ewart, M.D., F. R. C. P., Wm. S. Gottheil, M.D., and William G. Spitler, M.D. This number treats of Diseases of the Thorax and its Viscera, including the Heart, Lungs and Blood Vessels. Dermatology and Syphilis. Obstetrics. Diseases of the Nervous System. We have in reference to preceding numbers invariably commended this quarterly and we still think that every progressive physician should subscribe to the work.

"Diseases of Bones and Joints"—By Leonard W. Ely, M.D., Associate Professor of Surgery, Leland Stanford Junior University, San Francisco, Cal. Sextodecimo: 220 Pages, 94 Illustrations. Surgery Publishing Co., New York. Price, Cloth, $2.00.

The unusual interest now manifested by the profession in acute and chronic arthritis, as well as other forms of bone and joint diseases makes this book particularly timely.

Prof. Ely is particularly well equipped from experience to present an authoritative work, having specialized in this particular branch of surgery for years.

This book is intended primarily for the general practitioner, but instead of furnishing that long suffering and very important person with a mass of details, and with many methods of treatment from which he may choose, the book lays down broad general principles, with the evidence upon which they are based, and then shows how these principles may be applied.

In a brief, terse way, it presents the Anatomy, Physiology and Pathology of Bones and Joints, Acute and Chronic Arthritis of various types, Ankylosis, Diseases of the Shafts, Acute Osteomyelitis, Chronic Inflammations in the Bone Shafts, New Growths in Bone, etc.

The profuse photo-micographs with other illustrations aid materially in placing up to the eye of the reader the contents of the book and the marginal side-heads, printed in contrasting colors, permits of ready reference.

It is a book which will be much appreciated by the general practitioner and can be read with the assurance that it presents valuable instructions from an authoritative source upon a subject where much light is needed.

"Manual of the Diseases of the Eye"—For Students and General Practitioners. By Charles H. May, M.D., Chief of Clinic and Instructor in Ophthalmology, College of Physicians and Surgeons, Medical Department, Columbia University, New York, 1880-1903; Attending Ophthalmic Surgeon to the Mt. Sinai Hospital; Consulting Ophthalmologist to Bellevue Hospital, to the French Hospital, to the Red Cross Hospital and to the Italian Hospital, New York. Eighth Edition. Revised, with 377 Original Illustrations, Including 22 Plates with 75 Colored Figures. New York. William Woodard Co., 1914.

The number of editions through which this manual has run and the translations into foreign languages through which it has

undergone indicates the high value that has been placed upon the publication by the medical profession in this and in other countries. As a teaching manual of the important subject it is unexcelled, for the author has exercised a rare discrimination in using such material as is needed and excluding material of little practical use to the practitioner. It is a steppingstone to a fuller knowledge of the subject as may be obtained in more complete text-books and a practical guide to the physician whose time is too limited for searching for facts in the standard text-books upon the subject. We heartily commend the work to students and practitioners.

"Ambidexterity and Mental Culture"—By H. Macnaughton-Jones, M.D., M.Ch., I. U. I., M. A. O. U. I. (Hon. Can.), F. R. C. I. and Ed.; Ex. University Professor Queens University, Ireland; Honorary Member of the Societies of Obstetrics and Gynecology, Leipsic, Munich and Rome; Ex-President of the Obsteric and Gynecological Section of the Royal Society of Medicine, the British Gynecological Society and the Irish Medical Schools and Graduates Association. New York. Rebman Co. Herald Square Building, 141-145 West 36th St.

This small brochre is an amplification of a series of articles written by the author for "The Child." It is an interesting disquisition upon a subject that bears closely upon the education and training of the young.

"A mass of evidence has now been collected which proves that the cultivation of ambidextrous exercises, both in art and writing, has a decided influence on the mind of the growing child and that such psychophysical effect has a direct bearing on the child's character."

The following are the contents: Chapter 1, The Preference for the Right Hand. Chapter 2, The Brain and Ambidexterity; Chapter 3, Ambidexterity in Relation to Writing, Drawing and Music. Chapter 4, The Montessive Method and Ambidexterity. Chapter 5, Ambidexterous Work.

The little work should prove a valuable aid to prospective surgeons as the importance of ambidexterity in surgical operations is universally recognized.

Publisher's Department

A Mouth Wash in Fever Cases.

In all fever cases where the tongue is coated, the lips dry and cracked and the teeth covered with sordes, the use of some cooling and soothing mouth wash would seem to be indicated.

Glyco-Thymoline in a 25% solution with cold water fills this want perfectly. Its frequent use is grateful to the patient and at the same time a great factor in relieving the condition.

"Paraldehyd" possesses many of the good without the evil qualities of chloral. Used in Insomnia resulting from various causes. The objectionable taste of the chemical is, to a great extent, disguised in Robinson's Elixir Paraldehyd. (See advertisement in this issue.) It is an elegant preparation.

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CHARLES S. BRIGGS, A. M., M. D., Editor

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Original Communications

THE PHYSICAL CHARACTER OF CRIMES OF THE ALCOHOLIC.

By T. D. CROTHERS, M.D.,
Superintendent Walnut Lodge Hospital, Hartford, Conn.

The terms alcoholism and inebriety are often used synonymously, and are followed by misleading conceptions and conflicting statements, which seriously obscure facts.

Alcoholism is literally a condition of poisoning from spirits, the prominent symptoms of which are toxemia and paralysis. The former is always prominent and traceable, and the latter may be unnoticed, except from expert study.

A large number of alcoholics are seldom seen intoxicated, or stupid from the effects of spirits. Such persons drink wine at the table, or spirits and beer at regular intervals. They are called moderate-drinkers, and for a time at least, pass for normal, healthy persons; they carry on their business relations without arousing suspicion of ill health or attracting attention in any particular way, and to many persons they appear as examples of strength and vigor.

The alcoholic may become intoxicated under peculiar circumstances, but he never abstains. Spirits are continually used. The toxemia is evident from the deranged and lowered activities, par-

ticularly of the senses; and the functional correlation of impulses is irregular and defective.

Automatically, he may exhibit consciousness of the surroundings and ability to adapt himself to conditions, but when these are greatly changed, his weakness and ability to act normally will be very apparent.

The toxemic conditions from which he suffers are those of hypertension and hypotension with anesthesia, depression and irritation, and exaltation of the functional activities.

The inebriate is one who drinks to excess and then abstains and after a free interval of sobriety begins again. These free intervals are often distinct as to duration of time. The free period is marked by every appearance of health and sanity. During the time of excessive drinking, there are prominent manias, delusions and deliriums.

The inebriate is always a neurotic and a psychopath and has some defect of brain and nervous system, either inherited or acquired, for which spirits of all other drugs brings the most perfect relief. The drink excesses resemble epilepsy in their onset, development and termination, and are always more or less convulsive in character and movement.

The alcoholic may develop into an inebriate, but the inebriate seldom becomes an alcoholic, in the strict sense of the word.

The crimes committed by the alcoholic are coarse, blundering, stupid, impulsive acts, seldom preceded by preparation, motives or premeditation. They are from obsessions and morbid impulses of short duration. Such persons kill their wives and children, without any reason, assault their associates, set fire to buildings, put obstructions on railroad tracks, and are coarse kleptomaniacs, and then offer the most childish explanations for their conduct, or deny having committed the act.

They are prominent in riotous proceedings of any kind, and often display socialistic and anarchistic principles, to tear down and destroy everything which may appear to be abnormal.

The alcoholic is always a reflection of the surroundings and subject to mental contagion. He is a thief when the opportunity

occurs. He is brutal and harsh when under no restraint from persons and surroundings. There is a vein of sanity in his recognition of the conditions and efforts to appear normal.

In the better circles of society he poses as an independent and liberal, cut loose from all ties of society and prestige. He is a speculator and unscrupulous politician, looking for chances to amass wealth, and yet lacking perseverance and courage to work for it. His crimes are physical and so associated with cowardice and prevarication, timidity and stupor as to be unmistakable.

Egoism inordinate is very common. He may engage in complicated crime, but he is unable to conceal the motives and purposes. He may exhibit revenge and anger, but they are transient. His weakened brain power and faulty sense destroys his ability to judge of the relation of cause and effect. While he is receptive to impressions from others, he is unable to carry out the work if it requires time and control. He may be a wife-beater, starve his children, neglect to provide the comforts of life for those dependent upon him, and show no concern for anything but his own interests.

This approaches dementia and idiocy. The alcoholic is an idiotic, demented criminal always, who by reason of the anesthesia from the continued use of spirit is incapable and incompetent to act normally. Automatically he may seem to cover up his real condition. There is a large number of alcoholics who live and die without attracting much attention, who from change of circumstances and surroundings would develop criminal impulses and dementia unsuspected before.

The inebriate, as a criminal, is a convulsive maniac, subject to suggestions from within and without. He has delusions of the infidelity of his wife and his associates, which lead up to the most violent acts, regardless of consequences. His conduct while under the influence of spirits is marked by wide variations of reasoning, control and morbid impulses. Delusions of grandeur, strength, extreme irritation, hypersensitiveness to conditions, real or imaginary, followed by depression, melancholia and low delirium, succeed each other.

In each of these conditions crimes are always possible and, like those of the alcoholic, are always physical, but less coarse and brutal. The anesthesia from the alcohol excess lowers the ability of appreciating the surroundings and their significance. The restraints of society, obligation and duty are lowered beyond recognition, and acts are committed regardless of consequences. Revenge for real or imaginary injuries, suspicion of wrongs and suggestions of forcible remedies, culminate in crime at any time.

In this there is distinct paralysis of certain brain areas, with suspension of reason, judgment and sensory impression. After the convulsion has subsided, remorse, depression, confused memory and faulty reasoning follows. This is a dangerous period in which homicidal obsessions may materialize. Suicides are common at this time. Obsessions suggested from without often fix themselves on the bewildered brain and end in crime.

Thus a man, after recovering from intoxication, was told that some enemy had given him spirits for the purpose of taking advantage of him, and he committed a homicide. Had his victim been away, and an interval of a few hours or a day passed by, this homicidal impression would have died out. The criminal impulses in an inebriate are confined to a very short time, and often there are motives and preparations which show a degree of sanity, but the persistence of the obsession is very uncertain. An alcoholic is a dement and idiot in crime circles. An inebriate is a maniac with cunning and reasoning, but his mental condition is so variable that crime can never be predicted, except from some combination of circumstances unforseeen. Shrewed criminals avoid associating with alcoholics and inebriates, although they may take advantage of the latter to conceal their own acts. There is a certainty of exposure that they are not willing to risk.

Both the alcoholic and inebriate suffer from what is called moral palsy, a condition known in a general way to be paralysis of the higher brain functions; they lose all consciousness of right and wrong. There are men and women in all relations of life who show symptoms of this condition in their disregard of the normal, natural relations of duty and obligation.

This particular palsy is not infrequently inherited. There are certain areas of retarded brain growth, and the person is born with feeble regard for what is called moral obligation. Many of the criminals of the higher class are moral paretics from inheritance. On the other hand, this species of paralysis is certainly cultivated and grown, particularly in the alcoholic and inebriate.

It has long been known that the anesthesia from spirits falls most heavily on this, the highest and last formed brain function. Some very interesting physical experiments have brought out this fact and demonstrated beyond question that the recognition of duty and obligation is lowered, as a direct result of spirits.

The physical character of crime from a brain in an anesthetized condition can be constantly observed. Criminal acts requiring premeditation and reasoning are seldom seen, acts that have come suddenly from suggestions and surroundings may be executed if the circumstances are favorable. Otherwise they will not materialize. Thus the man intoxicated is very generous, full of promises, or very vindictive and homicidal, determined to do some harm, but if the occasions are adverse, these impulses die away.

Crimes against property are more common than against persons. The anesthestized brain is evident in the stupid efforts to conceal or explain their conduct. Inebriates or alcoholics are seldom burglars. The inebriate may engage in crimes, but always during the free interval. They may forge notes, become defaulters, and assist others in crime, but never display any genius or skill, and when the drink paroxysm comes on,, lose all secretiveness and show anxiety to expose others and explain how the crime was committed. A certain number of alcoholics may become inebriates, that is, drink to great excess for a brief time, and then abstain and display convulsive enthusiasm and anxiety to prevent others from drinking. Crimes occurring from this class have marked psychical influences and generally concern property.

There is a class of inebriates that is termed alcoholic hallucinosis. They are neurotics with free intervals, but possessed with

peculiar hallucinations, which constantly misinterpret the impressions from the senses. There are states of paralysis and profound toxemias which continue, long after the spirits are given up. During this time the brain is unable to judge clearly of conditions and their relations. Such persons are really very dangerous, because of these defects of the senses. The hallucinations become delusions, and the mind is continually occupied in construing acts of others and finding some hidden meaning and evidence of intrigue and deception.

Their crimes are sudden and impulsive. I have been called in a number of instances to determine the question of sanity of persons of this class. Their conduct after the crime, so childlike, stupid and idiotic, was better evidence of their impaired mentality than any previous history.

Men and women who have been alcoholics for years and have lost their property and social standing, then for reasons unknown, both physiologic and pathologic, become abstainers, and with these defects of brain power and reasoning and concealed delusions are prominent.

Because they have not drunk spirits for a long time it is assumed that they have recovered and are normal. This is a grave error, which and careful study will show. There are many persons who are skeletons of their families, with concealed delusions, that are likely to develop into crime. Such persons ought to be confined, but public sentiment and false notions refuse to consider them irresponsible or insane.

A recent example was of a man who had drunk heavily for twenty years, principally spirit, and was never intoxicated. He was able to carry on quite a large business with success. After an attack of delirium, lasting two or three weeks, he recovered and remained abstinent. His brain was feeble and he gave up business. To his intimate associates and friends he exhibited delusions and five years afterward these delusions culminated in a brutal homicide, after which he drank to great excess. He was tried for murder, convicted and hanged.

There was stupidity and profound ignorance in not recognizing his insanity long before the crime was committed. His drinking afterwards was thought to be an effort to cover up and lessen the punishment. Many of the grave faults of expert testimony as to the sanity and responsibility of criminals comes from the imperfect studies and the failures to recognize the anesthesia and paralysis from alcohol that is present in all such cases. There is a common theory, that designing persons may take advantage of the alcoholic and inebriate, by suggesting crime and stimulating him to carry out homicidal acts. This is unsustained by critical study.

The alcoholic is open to suggestion, and this might materialize in a very brief time, but the impressions are exceedingly transient. The inebriate may be persuaded to do something abnormal, but this is also uncertain. Thus a man was persuaded to go and shoot another. On the way he lay down and slept for an hour or more. When he awoke he had forgotten the purpose of his journey. Later he boasted of what he had been persuaded to do, and expressed pleasure that he had not done it. While suggestions to commit crime may be very common, they are very dangerous for the promoter and very likely to react on the person who makes the suggestion. Some very curious facts have been noted, but all bearing out the statement that crime suggested from outside sources is an exception to the rule.

Statistics show that a large proportion of brutal, physical crimes are committed by persons who are either alcoholics or inebriates. These are always low-grade acts, often particularly atrocious. The reason is suspended.

The crimes of both classes follow along parallel lines. In European countries alcoholics commit crimes of one sort or another, to the extent of from 10 to 15 per cent, that is, criminal studies show that from 10 to 15 per cent of the low-grade crimes are committed by alcoholics. From 20 to 30 per cent of the higher grades of crime are committed by inebriates. The oft-repeated statement that criminal statistics show from 50 to 75 per cent of all crimes due to alcohol is undoubtedly true. In

some sections the percentage is much higher. Where no studies have been made of the alcoholics or inebriates, history of alcoholic addiction and crimes of all kinds against persons and property have been committed, these figures are undoubtedly true, and indicate beyond question how largely alcohol is responsible for the destruction of the moral character and responsibility of persons.

A number of persons who have committed most serious crimes have had a history of syphilis and the conclusion is supported that the toxemia from syphilis intensifies those from alcohol and prepare the way for maniacs of the very worst character.

Crimes following epileptic convulsions are recognized as particularly brutal and senseless. Where epilepsy has been preceded by the use of alcohol and the convulsive drink storm in the inebriate, atrocities are to be expected.

A summary of some of these facts may be stated as follows:

First, the ordinary alcoholics are less liable to criminal acts of a homicidal character than the inebriate. His violations of law and order are along the idiotic, demented stages.

Second, the inebriate is a maniac in a general sense, and the convulsive desire for spirits is very likely to provoke crimes against persons, crimes of passion, crimes of impulse, crimes of pronounced physical character. These convulsive manias are brief, intense and uncertain, and are liable any moment to culminate in coarse, brutal acts.

Third, the alcoholic and inebriate criminals, while constituting a very large percentage of persons coming under the criminal class, are degenerates, dements, and depend upon conditions, surroundings and favorable circumstances.

There is present in almost every community an uncertain and very large element of potential criminals, ready any moment to commit acts that are destructive and obstructive to law and order. So far these conditions are unstudied and are simply tolerated. Courts are concerned in the correction and suppression of overt acts of this class. Experts and judges try to weigh the degrees of sanity and insanity. In all these there is confusion, worse con-

founded, and an entire ignoring of causes that are clearly defined as the germs of typhoid fever.

The physical character of the crimes following the use of alcohol is a growth and development that can be recognized, prevented and stamped out, and is at present a reflection on the intelligence and failure of both medical and legal professions.

Australian Notes.

By E. S. McKee, M.D., Cincinnati, Ohio.

Australia, geologists tell us, is the oldest country geologically speaking, on the globe. Mt. Kosciusko, Australias highest mountain, 6,000 feet, was the first piece of old Mother Earth to rise from the flood. Geologists attending the British Association for the advancement of Science reaffirmed this fact.

Australia may be an early riser, but she is slow in one respect. I have seen more whiskers in Australia than in any other white country, except Russia. The country which wears whiskers in this aseptic age is backward in a sanitary way. I do not wish it to be inferred that Australia has not taken a bath since she emerged from the water ions of ages ago, but her men should shave. The young ones do, but the old and middle aged often do not. I was surprised to find one capital city—Brisbane—which had practically no sewage system, used the pail system as in India, China and Java. They are talking of remedying the matter, but they should have done so many years ago. Returning to whiskers: The King George style are popular. So are the President Poinaire. A few Abe Lincolns, an occasional Paul Kruger, while General Salvation Army Booths are quite frequent among the aged.

What whiskers have to do with whiskey and other strong drinks used in Australia, also weaker drinks, than in any country that I know of. The drink question here is much what it was in England thirty years ago and that was bad, much worse than now.

I have seen more sheep in Australia than ever. They count their sheep here by the square mile. Everything is big here. I have traveled six thousand miles by rail in Australia and only seen a small portion of it. It is nice to have a pass. I haven't had one since I was a boy in the newspaper business, in those good old days when everybody about the newspaper had a pass. What is worrying me is the thought of those other 13,000 miles over which this pass is available, but I could not reach.

Federal election day in Australia was September 5. It was very quiet, the war overshadowing all else. However, the Labor Party won out as usual. An interesting sight was voting booths at prominent railroad stations, so that the traveling men could vote while traveling, thus not depriving him of his vote because obliged to be away from home.

The poet who said Australia is a land of "Bright, scentless flowers and songless bright birds, was wide of the truth even for this wide country. True, there are both, but there are many of both, which deny the allegation. I was surprised to find the trees and forests full of parrots. So full in fact that boys are hired in the fruit season to shoot them, they are such a menace to the fruit crop. Indeed, parrot pie is one of the delicacies.

Rabbits, foxes and prickley pear are three scourges which have been introduced into Australia and have multiplied wonderfully. The foxes eat the young lambs and the poultry; the rabbits kill the fruit trees, and the prickley pear is taking the country. The eradication of these three pests is a great problem.

Australians are quite English, you know, but as we, they are making some changes in the language. The good old English word paddock, which means a small lot or field of an acre or two in England, in Australia is used to mean any thing up to ten thousand acres. But then Australia is a big country. The word mob is used to denote cattle, sheep, horses in the sense that we use flock, drove or "bunch." "Newchum" is equivalent to our tenderfoot or the Hawiian "manlinini."

Railroads in Australia all belong to the government, or rather to the State. Each State has its own road and its own gauge.

One must always get out and change trains at the State line, which is to say the least something of a nuisance. The States are trying to come to an agreement on gauge.

Australia is about the only country I have been in in fifteen months 'travel where everybody is not hoping, some day, to get enough money to come to America. Australians are pretty well satisfied at home. They certainly have one thing in abundance and that is room. The distances are truly magnificent. An ordinary ride to a neighboring city is eighteen to twenty-four hours by train.

Winter in Australia is a farce. I have not seen snow or ice here, though I was here through one winter month and a part of another, and have several times been at an elevation of 4,000 feet. At the beginning of August I saw the fruit trees blossoming, having just seen them in April and May in Japan. Most trees keep their foliage all winter. There are a great many palms and other tropical growths in all latitudes. Many people in Melbourne, Sydney and Adelaid have never seen snow, though they lived there for a generation. On some of the highest mountains there is snow. Yet I have suffered keenly from colds in Australia. They do not prepare for cold weather. Ordinarily, houses, hotels and public halls and places are not heated at all. There is no preparation for it. An American will become thoroughly chilled if he sits quietly in one of these unheated rooms for an hour or two. We, of course, overheat our houses, but the Australian underheats or rather does not heat at all in most instances. In some houses and a few offices or hotels you will find an electric heater which looks very pretty.

Speaking of fire brings us to fuel and fuel consists usually, here, of wood. Australians, like their elder sister, America, are ruthlessly destroying their forests. They are poor at best. Thin, scraggy timber, but such as they have they are wasting. All through the country you see trees which have been "ring circled." We call it deadened. They do this so that the grass will grow better without the shade. When time permits, many years later, the tree is cut down and sawed up for fuel or lumber. They

should be planting trees instead of killing them. Australia needs men, moisture and forests. The third causes and controls the second. Why should men who, in Australia, are so dry, destroy what causes moisture?

Proceedings of Societies

At the third annual meeting of Alienists and Neurologists of the United States, held under the auspices of the Chicago Medical Society, for the purpose of discussing mental diseases in their various phases, July 17, 1914.

The Committee on "The Causative Forces of Mental Deficiency" reported the following resolutions, which were unanimously adopted:

"We feel it unwise at this time to make any recommendations in regard to constructive legislation owing to the lack of proper evaluation of available data as to causes and sources of mental deficiency."

"We do, however, recommend and urge regulation of mental deficients and the furthering of investigations as to the causes and sources."

At the third annual meeting of the Alienists and Neurologists of the United States, held under the auspices of the Chicago Medical Society, for the purpose of discussing mental diseases in their various phases, July 13-17, 1914.

The committee on the Prevention of Insanity reported the following resolutions, which were unanimously adopted:

"WHEREAS, It is well recognized by alienists and neurologists the world over that certain factors are the chief causes of physical conditions accompanied by mental derangement and deficiency; and

"WHEREAS, These major causes are largely, if not wholly, controllable and eradicable; and

"WHEREAS, These major causes are alcoholism, habit-producing drugs, venereal diseases, work in unsanitary and unhygienic surroundings, and hereditary influence, including the immigration of the physical and mental unfit. Therefore, be it

"*Resolved*, First: That we recommend to the proper State authorities the absolute control of the sale of alcohol until such time as actual prohibition be enacted.

Second: That the sale of all habit-inducing drugs be strictly regulated in all States of the Union.

Third: That municipal or State control of venereal diseases be established, with proper treatment for indigent patients, to the end that the spread of syphilis and gonorrhea be prevented.

Fourth: That proper, special hospitals for the care and treatment of alcoholism and drug addictions be established.

Fifth: That municipal, State and National inspection of labor conditions be regularly maintained and child labor abolished.

Sixth: That no known defective, dangerous to himself and to others, should be permitted to have unrestricted liberty.

Seventh: That adequate teaching of the principals of heredity and sex life be initiated and fostered in the home with the view to its introduction into the curricula of schools—above the grammar grades—this instruction to be given to the sexes separately.

Eighth: That the various States pass reasonable and universal marriage laws, that will be reciprocal, in preventing the marriage of the physical and mental unfit.

Ninth: That a psychopathic laboratory be connected with the criminal courts, common schools, railroads, transportation companies and public service utilities, responsible for the actual safety of the general public, should have their employes regularly examined as to their physical and mental fitness.

Tenth: That, inasmuch as state, county and city public health institutions should have as their superintendents, men of highest qualifications, who may devote their best efforts to their tasks, we recommend that all such positions be subject to civil service examinations.

Eleventh: That in addition to the above, we recommend a nation-wide campaign of education conducted through the public press, university and medical schools, boards of health, state, county and city boards of education, women's clubs and other proper educational mediums, upon the true signficance of the

development-physical, mental and moral, of the individuals and race, and finally, we recommend that a committee be appointed to promote the enactment of the above resolutions.

At the third annual meeting of alienists and neurologists of the United States, held under the auspices of the Chicago Medical Society, for the purpose of discussing mental diseases in their various phases, July 13-17, 1914, the Committee on "Alcoholism as a Causative Factor of Insanity" reported the following resolutions, which were unanimously adopted:

"WHEREAS, In the opinion of the meeting of alienists and neurologists of the United States, in convention assembled, it has been definitely established that alcohol, when taken into the system acts as a definite poison to the brain and other tissues; and

"WHEREAS, The effects of this poison are directly or indirectly responsible for a large proportion of the insane, epileptics, feeble-minded, and other forms of mental, moral and physical degeneracy; and

"WHEREAS, The laws of many States make alcohol freely available for drinking purposes, and therefore cater to the physical, mental and moral degradation of the people; and

"WHEREAS, Many hospitals for the Insane and other public institutions are now compelled to admit and care for a multitude of inebriates; and

"WHEREAS, Many States have already established separate colonies for the treatment and re-education of such inebriates, with great benefit to the individuals and to the commonwealth; therefore, be it

Resolved, That we, unqualifiedly, condemn the use of alcoholic beverages and recommend that the various State legislatures take steps to eliminate such use; and, be it further

Resolved, That we recommend the general establishment by all States and territories of special colonies or hospitals for the care of inebriates; and

Resolved, That organized medicine should initiate and carry on a systematic, persistent propaganda for the education of the

public regarding the deleterious effects of alcohol; and, be it further

Resolved, That the medical profession should take the lead in securing adequate legislation to the end herein specified."

At the third annual meeting of alienists and neurologists of the United States, held under the auspices of the Chicago Medical Society, for the purpose of discussing mental diseases in their various phases, July 13-17, 1914, the Committee on "Syphilis as a Causative Factor of Insanity, reported the following resolutions, which were unanimously adopted:

"WHEREAS, Syphilis is responsible for a large percentage of all insanity and mental deficiency, be it

"*Resolved*, That First: Health departments (municipal and State) should be equipped to make laboratory examinations for venereal diseases.

Second: All hospitals for the insane should be equipped to make laboratory examinations for venereal diseases.

Third: Hospitals and dispensaries for the treatment of venereal diseases, should be provided.

Fourth: Physicians should be compelled by law to report cases of venereal diseases, as is now done in other contagious diseases.

Fifth: Applications for marriage should be required to furnish health certificates.

Sixth: Lectures and bulletins should be offered freely to the public regarding venereal diseases.

Seventh: Newspapers should be requested to use their best influence to educate the people concerning venereal diseases.

Eighth: Sex hygiene should be taught in the public schools, above grammar grades, to the sexes separately.

The proceedings of the third annual meeting of alienists and neurologists of the United States, held under the auspices of the Chicago Medical Society, July 13-17, 1914, will be published in one volume by the Illinois State Medical Journal. It will be in double column, the type and size of page the same as the Journal, and will comprise from four to six hundred pages. This book will contain the papers read and their discussions, together with

resolutions adopted. The subjects covered are: Acquired Insanity, Epilepsy, Mental Defectives, Alcoholism, Abderhalden Test, Syphilis, etc.

The subjects of special interest are:

First: The Abderhalden Test (especially in dementia præcox), which embraces the technic for the preparation of the substrates, mixing of materials in the test tubes, and the interpretation of the reaction. This will comprise one of the most complete symposium on the Abderhalden Test, so far, printed in this country.

Second: Syphilis. The diagnosis of early syphilis by the Dark Field Illuminator. The technic for obtaining and mounting the specimen for the Dark Field examination. The technic for staining specimens obtained from local lesions and mucous patches, and the method for preparing and staining tissues for sections, for microscopic examination.

The Wassermann Test: The technic for preparing materials, the method for mixing the same in test tubes, and interpretation of the reaction.

Third: The treatment of early and late syphilis is up to date, and embraces the technic for mixing and the method of administering intravenously salvarsan and neosalvarsan, also the technic and method for intra-spinal administration of neosalvarsan and neosalvarsanized serum in locomotor ataxia and paresis.

The proceedings will be published and ready for distribution by October or November, 1914. As only a limited number is left unsubscribed for, those wishing the publication will please send their subscription at once, as there will not be a second edition. The price of book is $2.00. Send subscription to the editor of the Illinois State Medical Journal, Dr. Clyde D. Pence, 3338 Ogden Avenue, Chicago, Ill.

Selected Articles

THE PHYSICIAN AND THE MAN.

By Geo. F. Butler, M.D., Mudlavia, Ind.

No better approach to a consideration of the physician's personality could be made than by way of these words of Sir J. Russell Reynolds:

"You must see that disease is something far more important and far deeper than an aching head, a hurried breathing, or a fluttering pulse; that disease is something much more serious than the mere interference with the mechanism of physical life; that the measure of its evil is not the increased rapidity of pulse, not the daily wasting of the body, nor its numerical frequency in the bills of mortality, but the degree to which it so often tells on the mind, heart, will and power of man, that it prevents him from doing that work in this world which it has been given him to do. * * * You must come to know the meaning of the infant's to understand the tone and teaching of its cry. You must appreciate the patience and long-suffering of woman and the hardihood and rough exterior of man. You must look and see beneath these if you would measure the true degree of their affliction. You must learn to feel with and understand the feebleness of age, and gain all that is required for your ministration to its wants, from those hints that come to you through the failing powers and closing evenues of a soul that has for a long time battled with a world too rough. * * * Wherever there is life, there is your field of study."

In short, the would-be practitioner must be not only a physician, but a man. He must be not only a man, but a gentleman—a person of broad sympathies, kindliness of heart, undertaking a sol-

emn trust which is to be carried out with punctilious care. He must be a man in whom the sick can feel implicit confidence—a confidence which may alone be inspired by the all-worthiness of its object. It would be foolish to assert that if he is not this he will fail, for there are numerous examples to the contrary, examples of men who, though very far from following the tenets of a gentleman, using the word in its best sense, are nevertheless successful practitioners; while on the other side there are examples of real gentlemen who fail as physicians. But whose is the real failure here? Is success to be gauged in money or in character? This question, put to a workday world gorged to repletion with the death-bearing gifts of the senses, would receive a very certain and nimble answer, but it is to be hoped that the same answer would not be forthcoming from anyone who had resolved to devote his life to the practice of medicine, for such a person would be well aware in the beginning that the influence of character upon the world, as well as upon self, is to money as the choiring of angels is to the bark of a predatory fox. The ability to acquire name and money is something very different from the qualities which promote the happiness and usefulness of him who possesses them, and in all the world there is no more vital, essential, profound truth than this; that whether outward success or outward failure be the lot of the man of character, he can not fail of the real success, which is that of the soul, while the man devoid of character is a miserable failure in the true sense, even though he appears to the half-blind observers to luxuriate in all the benefits that can be bestowed by both God and man. I am well aware that this seems trite. A great many writers have said as much before, for the crowd to accept politely, forget instantly, and rush upon its way. But not all of the crowd so rushes. Some there are who linger with knit brows, putting solemn questions to themselves, and it is hoped that a generous proportion of these lingerers over the words here will be composed of medical men, as it always has been from time immemorial. The ideal physician is he who combines the principles and a profound knowledge of his high calling. But the ideal? Whoever reached it? It is

some thing to pursue, not to attain, always receding as we advance. None of us is the ideal physician, as he who is called so knows better than anybody else can.

Herein lies the hope and incentive of the doctor, old or young in years and experience. If he were confronted at once with the necessity of acting the part of an ideal physician the responsibility would overwhelm him, as the college graduate would be overwhelmed if suddenly confronted with his ignorance and commanded to overcome it immediately. Fortunately, our problems appear to us little by little, slowly if inexorably, giving, as a rule, plenty of time to devote to their solution. In the case of the physician, as with every other man, however little he may realize it, the first step onward in his career is to set himself to strengthening his character—a step which, very fortunately, is not beyond the ability of the weakest of us, while it tests the strength of the strongest. Much of character may be assumed, of course, and much that is not character may seem to be so, but there is nothing like the real power of it. It will make its way through all obstacles. Its influence need not necessarily be widespread. It may communicate its benefits to but a few, on account of the comparative isolation of its possessor, but those benefits will be real, not only apparent, and the weight of them as compared with the merely physical benefits arising from the brilliant imitation will send the balance beam flying skyward at the other end. It is quality, not quantity, that counts. The ancients allowed one vote to every ordinary man and a hundred votes to every prophet. The physician who does his best in the place where circumstances has placed him is a prophet, regardless of what he may have the reputation of being in his own country. His work is worth that of a hundred ordinary practitioners who address themselves solely to the task of achieving material success, even though he may have but one patient to their thousand.

It will be seen that I am not myself of the number who hold the "all-angel or all-devil" doctrine regarding physicians. The worst of us have some good within, and the best of us are not angels. But we should strive for the ideal, even if only for our

own sakes, for happiness, or as much of happiness as may be had in this sphere, lies that way, and that way only. That we shall fall short of this ideal is a foregone conclusion; that we shall slip, stumble, even fail, is to be expected, for that is the universal experience, without which life would probably prove tame to the point of cessation. Our mistakes are the seeds from which, with proper care, our most successful fruits grow in due season. We should be no more ashamed of a failure than of a success, for there must be two parties to a failure, namely, the worker and his environment, the object upon which he works, without which two the failure could not have occurred. There is always hope and a chance for the man who tries, providing his subconscious mind assures that he is following the right vocation.

While in some treatises on the subject of a medical man's personality there are given wise directions regarding his appearance as expressed in his walk, language, gestures and deportment generally, so that by observing the precepts a harsh and repellant man may become pleasant and agreeable, I myself have no doubt that whoever cultivates his character may dispense forever with all anxiety regarding his appearance, for appearance is but a part of character, and will be governed wholly by it. Moreover, it is well known that the doctor of typically inviting appearance is often suspected of possessing a better education sartorially than medically. More than one doctor has been rejected because he wore patent leathers or a too-modish collar. I do not adduce such cases as indications that a physician should not dress well, for he should, and if he has character he will if he can. But it is a vain repetition of words, this laying down rules for assuming anything, whether it be manners, clothes or any other mere appearance. Let each of us be what he is without fear or favor—not too dogmatically, but with confidence and a certain pride in what we individually represent, for we are made as we are as trees are made, of the mountains and valleys, no two of which are exactly alike. As the grim and forbidding mountain crag has its place in nature as well as the smiling plain, so has the gruff man his place as well as the polished, even as physician and comforter,

and each of us will find his true level—the level upon which he will feel at ease and find the good of life—only by maintaining his own character, and it is a matter of record, over and over again, that the medical race is not always to the smooth and polite and well dressed. There are currents in the tide of success that baffle all our philosophy—that is, outward success: of the true success, happiness, content, the full measure of life and usefulness, there is never any doubt. There is but one way to it, and that is character.

Many a man and physician has thrown himself off this pleasant level by attempting to assume to be what he is not, inviting thereby into his field of endeavor persons and conditions that are foreign to his real interests, exposing himself to misunderstanding, ingratitude, discontent and failure. It is what we really are, and that alone, that attracts to us the kind of patients that we ought to have both for their and our good, and to assume to be what we are not is to attract other patients, persons for whom we have nothing, and who have nothing for us. As Socrates said: "I educate by going about my business." He did not seek to educate anybody, he talked for his own sake, because he liked to do so; it was his life that he was expressing, and those persons who were near enough to his level became educated in listening to him, while others received nothing from the same words. This is the very attitude which medicine in its best aspects has always taken, and which it always must take. It does not seek patients, it attracts them, each to his kind. To attempt to attract other kinds by assuming anything is the method not of a physician but a patent medicine "doctor." In short, a physician must be one who practices medicine because he likes to do so, not for the emolument which he may derive from it—and if he is faithful he will nevertheless receive sufficient emolument, all that is best for him to have, whatever his outward condition may be. Some of us must learn our life-lessons through poverty, and some through riches; and do whatever we may, there is no escape from this schooling. For the schooling is what we are here for,. doubtless, not merely

to heal disease, our vocation being only the curriculum through which we rise to graduation.

A thorough understanding of and belief in this point of vieew will add greatly to our ability to follow this advice from Dr. Cathell:

"School yourself till you can prevent your thoughts, embarrassments and opinions from showing in your countenance during anxiety and emergencies, and, above all, discipline your features and manners, so that the nervous and patients who are very ill can not detect in you unfavorable reflections about themselves which you wish to conceal. Self-reliance and self-possession are very important elements of success."

It does not require a great amount of psychotherapeutical knowledge to see that this advice, given to a student who is not standing on the firm rock of character, would prove the very means of throwing him off his balance, as to tell a man that you will give him a thousand dollars if he will refrain from thinking of monkeys for three days before he asks for the money. Every time he thinks of the money he must think also of the monkeys, and the young student, in his emergency, would be thinking so much about his deportment that he would be confused out of all semblance of sincerity, the very thing which he wishes to assume. Of course it is understood that Dr. Cathell is addressing the right kind of men. The schooling to which he refers should be that which teaches something more than an acquired ability to assume what we do not feel; it must reach to the very fount of life and death; it must be all-around culture, wisdom; the sure and certain knowledge that all is mind; that the issues of life are already looked out for; that as men have always died so they always will; that death has its place as well as life; that suffering has its place as well as pleasure; that it does not always lie in our power to prevent the things we would; that having done our best we may abide the result with equanimity; that we have absolutely nothing to fear, nothing to cause us embarrassment or anxiety; that all our efforts are to be bent upon doing our duty, and that when we have done that and apparently failed, it is because the issues are

taken from our hands by a wiser physician than we can ever hope to be. This alone will give us the proper appearance, for such knowledge can not fail to inspire a sincerity and surety in the heart that must shine in the face and form as a beacon light for all those to see who are able to do so—for those who are near enough to our level of understanding to see the whole of what we are expressing, instead of only the under side of it, as others will do.

I admit that this is a high standard to set, an almost impossible standard to attain. But there is no man so far away from it that he can not point himself in its direction, and, as I have said, it is the pursuit, not the possession, of the ideal that engages us, for the attainment of it is out of the question. At every advance that we make toward it, the ideal also advances just so much, keeping us forever seeking, rising, learning. On the long journey we shall meet with many discouragements, much misunderstanding, unbelievable burdens of ingratitude, dismal failures, and now and then a trifle of success and a little encouragement. This is life, whatever may be the profession a man follows, whatever may be his outward lot in the earthly scheme of things. Our only salvation is to keep on, and, like the brook, as Emerson says, go only the faster for every fall we have. We are not infallible; it is impossible for us to become infallible, but we may aspire, whatever we are, and aspiration is never wanting of a salutary measure of success. Emerson, whose name now stands at the head and front of the world's culture as Plato's stood before him for twenty-four hundred years, informs us that every public venture of his, each one of those immortal works which have combined to make him the mouthpiece of all that is lovely, manly, wise, successful in the whole civilized world, was everyone of them, when first given out, a failure! Every one of them! Think of it! Every stone of that structure which is now seen to be the loftiest and firmest-founded in the world was rejected by the builders, while they busied themselves with mud huts, into which it was impossible for a ray of God's pure sunlight ever to enter! One way in which to look at this fact is to wonder at the inconceivable stupidity of the world,

bitterly arraigning it for its ignorance, declaring that it is composed of swine who do not know a pearl when they see it. Another and better way is to regard it as Emerson himself regarded it—which was to study it, learn its character, what to expect of it, and what it would be best for him to give to it. If the world really is nothing but a great swine, then the man who mistakes it for a gentlewoman and offers it pearls when she should know that it wants corn, he, that man, not the world, is to be blamed for the outcome, and he should for his own sake revise his ideas. Emerson's protection against the barbs of failure was a smiling indifference to what he brought upon himself ,his sole occupation being to live truth as he saw it, and now and then putting a little of it into print as the spirit moved him, for others to accept or reject, as they pleased or as they could. In short, he stood upon character as distinguished from gain, on service as distinguished from command, on love instead of tact. This was the secret of his success, and it is the secret of every man's success, physician or layman. The sooner we learn that the world is here to receive from us, to take from us when it can, giving as little as possible in return, and that in fact it has nothing, or next to nothing, worth our accepting, the better it will be for us; for it is as true now as it was in Seneca's time that "True happiness lies within, the other is a counterfeit felicity." And the world stands, not as a giver of things to us, but as a school to attend and absorb our lessons, everyone of which comes to us in the guise of a difficulty or an evil or a failure, is to fulfill our destiny on earth. The experience of Ralph Waldo Emerson, rightly interpreted, holds a world of comfort for the physician who is meeting with less success outwardly than he thinks he deserves. It is the world's way. There is no escaping it, and there should be no escaping it. We see, as college students, that it is only through meeting our problems one by one and solving them that we can reach to the heights of our diploma. That is the college's way. It is also the world's way, a good way, the only way. Every mistake, every backward step, every failure, is not wrong; it is right, for only by way of these apparently wrong ways shall we find the right way.

It seems unnecessary to add here that there are certain externals which the young physician should cultivate in order to appear at his best, and by them gain practice and friends, for that is taken for granted, providing they spring from character and not mere assumption; from knowledge, from wisdom, and not merely from a desire to please. A pleasant manner may be worth much to the bedside doctor, but if he does not feel pleasant he will make sad work of the appearance of it. Sympathy, also, has its place, but it must be an intelligent emotion, not one put on merely for the occasion, full of trite condolences lacking in all those attributes which go with truth and understanding, drops of water thrown against the wind. It can not be put on, it must be felt, and it can be felt in a really comforting way only by him who understands much more than what he sees with his physical eyes, by him who has learned through his own experience, bodily and mental, what grief is, and why is it so, as well as why it seems so terrible when we are suddenly presented with the problems of it. This understanding is not to be attained through studying medicine alone; it comes only with broad culture, the study of every phase of life and death as examined and passed upon by the great thinkers who have allowed nothing to stand in the way of their inquiries into truth. Technic, of course, is necessary, but it ever must come second. In schools of oratory the student is first taught the sterotyped gestures with which to accompany each sentiment that his words express, but when he has learned these gestures, how to make them with grace and conviction, he is taught to forget them as far as he may and address himself to his ideas, giving all his attention to them, when the gestures will take care of themselves. They will come automatically, with the stamp of his own personality on them. So the young doctor should first make sure of his technic, but he should not hold on to it with so vital a grip that he can not release it in part at times, devoting himself absorbedly to his own ideas of the situation. First in time, second in importance, that is the position of all externals as compared with those ideas of truth and love and service that go into the making of character for the young physician.—*The Medical Brief.*

Extracts from Home and Foreign Journals.

SURGICAL

Rupture of the Kidney from Slight Trauma.

J. L. Atkinson states that rupture of the kidneys is a comparatively rare result of trauma, more particularly so when the actual kidney tissue itself is lacerated. Keen quotes Kuster's statistics of injuries under his observation in the clinics of Berlin and Basle, and these show only 10 cases in 7,741 injuries, or a little over 1 in 1,000. Israels, with a large experience of renal surgery, had only one operative case. But in practically all cases met with either in actual practice or in the records, the condition has always been caused by a severe accident, such as falling from a height, crushing between buffers of a train, or by the wheel of a heavy cart passing over the abdomen. In the author's patient, a girl fourteen years of age, rupture of the kidney was caused by a fall from a veranda whose floor was eleven inches from the ground. The girl had run a distance of fifteen feet and had plunged through a wire netting at the end of the veranda. Profound shock and hematuria pointed to the real nature of the lesion. This was confirmed by operation on the following day. Recovery ensued.—*Medical Record.*

Modern Views on Biliary Calculosis.

The absolute indications for operation are: 1. The acute infectious cholecystitis, not responding to a few days medical treatment. To this may be added peritonitis due to perforation of the gall-bladder or ducts. 2. Empyema and all suppurative processes of the gall-bladder region or liver. 3. Chronic choledochus obstruction, when medical treatment is without effect, and when

intermittent hepatic fever set in. 4. Chronic relapsing cholecystitis, when medical therapy fails. 5. Adhesions when therapy fails. 6. Hydrops vesicae felleæ, with persistent and severe irritative phenomena. 7. Acute intestinal obstruction in patients with a history of gall-stones. 8. When carcinoma is suspected.—*The Journal of the American Medical Society.*

Gunshot Wounds in the European War.

Dr. George Rossetti, the Lancet's French correspondent, who is at the French front, writes that since the beginning of the war about 20,0000 wounded have been treated in Dijon. As would be expected, the wounds vary from a mere scratch to a fearful destruction of the parts struck. Most of the bullet wounds are in lower part of the legs and in the arms. There are comparatively few wounds of head, neck, thorax and abdomen. Wounds of the head are usually the result of schrapnel. The comparative size of the wounds of entrance and exit vary, the wound of entrance not always being small. As a rule, hemorrhage is not profuse except in some cases where several inches of bone are destroyed, then hemorrhage is occasionally troublesome. Most of the schrapnel wounds are infected with different kinds of ordinary bacteria. There have been quite a few deaths from tetanus. In the treatment of wounds the rule is: "As little surgery as possible, and when surgery is necessary, again as little as possible." Wounds are cleansed with mild antiseptic solutions and dressed daily when necessary. Amputations are performed only in cases of irreparable injury or gangrene. The results are fine. No attempt is made to remove bullets unless they are just under the skin. (Abstracted from communication to editor of the *Lancet Clinic.*)

Paravertebral Anesthesia.

Jurasz calls attention to the advantages of this method of nerve-blocking for gall-stone operations when general anesthesia is contra-indicated for any cause. He reports two cases in which it

answered the purpose perfectly, no further anesthetic being required for the skin or peritoneum. The patients were debilitated women of 39 and 73 with much dilated hearts. He injected 5 c.c. of 1 per cent solution of novocain on one side at each segment of the spine from the sixth dorsal to the first lumbar, a total of about 40 c. c. In ten minutes the anesthesia was complete and the abdominal walls had relaxed. There was no pain when the bile duct was opened and the gall-bladder removed. There was no operative shock in either case; the pulse was weak to start with but did not grow any weaker. The anesthetic is injected with a long fine needle on a level with the tip of the spinous process, and the lower margin of the transverse is sought with the needle and close to it, just below, the needle is pushed in ½ to 1 cm deeper, pointed a little more toward the median line, pushing the tip in cautiously until the patient feels a pain radiating forward. Then 5 c.c. of the fluid is deposited here and by the end of a minute there is no further pain. He leaves the needle in place and takes another for the next injection, using the first again for the third injection, and so on. As the technic is rather tedious and as the patient has to stand the brief pain when each nerve is reached in turn, the method is not adapted for general use, but may have life-saving value in cases in which general anesthesia is contra-indicated.—*Journal of Am. Med. Assn.*

Discussion of Fatalities After Salvarsan.

Wechselmann reiterates that a certain proportion of these fatalities are due to the inability of the kidneys to eliminate the poison. The trouble is, in fact, a retention toxicosis with uremic symptoms. For this reason he never gives an intravenous injection of salvarsan to a pregnant woman without first testing the functional capacity of her kidneys with Schlayer's milk sugar technic at least. This reveals that many pregnant women whose kidneys are apparently functioning normally, in reality are suffering from kidney derangement to such a degree that superposing any extra task would bring on an inevitable breakdown. The

renal vessels often showed impairment while the tubuli were evidently still normally capable. In one case of pregnancy eclampsia, the tests revealed the typical findings of vascular hyposthenuria. In others they showed that the oliguria at the end of pregnancy does not necessarily imply anything wrong in the kidneys. The pregnant organism is already under such strain that it seems wiser to go below the dosage of salvarsan usual under other conditions, and to commence with small tentative doses, starting with 0.15 gm., subcutaneously, up to 0.45. In the fatal case reported by Frühwald recently, the patient was a girl of 18, six months pregnant. He made an intravenous injection of 0.75 gm. neosalvarsan in 2 c.c. fluid and repeated the dose five days later. The next day the girl developed hemorrhagic encephalitis and died in the evening. The kidneys may have suffered from previous infections, mercury or alcohol, so that they are unequal to the task of eliminating salvarsan in the usual dosage. This insufficiency should be detected in time and the dosage planned to conform to it.—*Journ. of the Am. Med. Assn.*

The Prevention of Cancer.

Though cancer appears to have been recognized and to have received its full share of attention ever since medical observations have been recorded, the mortality rate from cancer is steadily increasing. Efforts at "early diagnosis" and the most thorough operations possible have had little effect in decreasing the death rate. (Alfred C. Wood, *N. Y. Med. Journ.*, July 18, 1914.)

The recent additions to cancer therapy, the X-ray, radium and mesothorium, so far have been found to possess but a very limited degree of usefulness.

In the present state of our knowledge, any marked reduction in the death rate from cancer can be brought about only by recognizing the potential cancers, the "precancerous stages of cancer," and curing these conditions before the malignant process has become established.

If the preceding is accepted, it follows that in the future the attention of the profession must be concentrated on the lesion that lead to cancer and their prevention or proper treatment, is present, rather than on the "early diagnosis" of the disease.—*Medical Review of Reviews.*

Appendicitis in Small Children.

From observations of six cases of appendicitis in children 15 months to 4 years of age V. Veau (*Quinz. therap.*) concluded that these patients show no sign of localizing appendicular pain. Some scream and manifest violent anger; others seek to push aside with the hand something causing discomfort over the abdomen. Tenderness in the right iliac fossa is not present. In order to elicit an entirely unconscious sensitiveness in these cases, an indirect method, such as those employed in the diagnosis of coxalgia in infants must be used. When light pressure is made over both iliac fossae, the child will execute slight movements of the right leg. If the pressure be increased, the right leg will become rigid and irregular movements of the left leg executed. Often the face will be observed suddenly to flush when pressure is made with the finger over the appendix. Muscular rigidity is so slight as to be hardly perceptible. The prognosis in these cases is grave, as the child can not keep completely still or withstand strict dieting. Operative intervention should be considered whenever the symptoms do not show a tendency to prompt betterment.—*Critic and Guide.*

Treatment of Bullet Wounds of the Abdomen.

As a rule a bullet in traversing the abdomen causes multiple openings in the gastroenteric canal, and as a result of division of a number of small blood vessels, an effusion of blood mixed with the contents of the intestines take place in the peritoneal cavity.

If the amount is not excessive the effusion gradually sinks into the lesser pelvis. Laparotomy made as late as the second day after the injury may reveal an absence of blood in the abdominal cavity proper. The effusion in the lesser pelvis is usually infected through the admixture of intestinal contents, so that a pelvic abscess may often complicate the bullet wounds and their immediate sequelæ.

Professor Payr, the well-known surgeon of Leipzig University, now engaged in war activities, foresees the important role of these abscesses for the prognosis of small calibre bullet wounds of the abdomen. In an article in the new Military Supplement of the *Muenchener medizinische Wochenschrift,* August 18, he proposes measures to anticipate and deal with them. In recent wounds he would simply perform a minimum laparotomy above the symphysis, under local anesthesia, and insert a hard rubber drain into the lesser pelvis, thereby endeavoring to prevent the formation of an abscess. If, however, the patient is not seen until 48 hours have elapsed, he would first make sure of the existence of a pelvic abscess, and if one had formed would evacuate it through the rectum. Should this prove impracticable because of the absence of a circumscribed fluctuating mass beside the rectum, he would even make a parasacral opening with a view of draining the whole of the lesser pelvis. This step is justifiable because under the circumstances pelvic peritonitis often becomes generalized and fatal. The coccyx must be enucleated in order to secure the necessary drainage.

Payr does not discuss the treatment of the wounds themselves, but it is understood that in time of war this must be very largely conservative and expectant. Intestinal perforations sometimes close spontaneously. Laparotomies can seldom be performed in field hospitals, and in any case it is out of the question to deal with each unit directly in multiple injuries. The comparatively simple measures he advocates are believed to be able to prevent much mortality, but this can be decided only by the future.—*Medical Record.*

MEDICAL

Treatment of Pruritus Ani.

Cropper calls attention (*Brit. Med. Jour.*) to two remedies which are of real and lasting benefit. The first is our old friend tincture of iodine (B.P.), which may be used in half or full strength with impunity. It is not at all irritating to mucous membranes, and the slight pain, caused if there are open skin cracks, is quickly over. A patient who had got into a very bad state with numerous skin cracks, wash-leather appearance of the skin, and not infrequent perineal abscesses, and loss of sleep, found that, used thrice weekly, this remedy enabled him to sleep all night, and, in fact, made him quite comfortable. It should not be used so as to excoriate the skin. Even better than tincture of iodine is compound tincture of benzoin; mildly stypic and really antiseptic, it may be that its action is largely mechanical, and gives the necessary rest to the affected part. Whatever its nature its action is little short of marvelous, for within two minutes or so the spirit in the tincture evaporates, and then all temptation to scratch the part is over. It is cleanly, and does not soil the linen as most ointments do, since it dries up very quickly. It may be used twice or thrice daily, and never irritates. Samples vary greatly from a light color to a dark brown, and also in consistency; but, luckily, they seem to have the same effect, though perhaps the darker and thicker Friar's balsam is the most useful.—*Critic and Guide.*

Disturbance from Ascarides.

Slaviero remarks that the pendulum is now swinging back to a more rational estimation of the pathologic importance of helminths, from the exaggeration of the old days and the recent opposite almost total disregard of them. He has lately encountered three cases of obstruction of the bowel by ascarides. The

patients were boys of 12 and 13 and a woman of 27. The seat of the obstruction and intense pain in the abdomen changed about in the first boy and in twenty-four hours there was retention of urine and other evidences of acute cystitis. Numerous ascarides were passed in the stools and finally a conglomerated bunch of 28, after which all symptoms subsided. The woman patient was of a tuberculous family and for six months had pain in the ileocecal region, aggravated by walking, and strictly localized. The pain then became suddenly intense, with collapse, and spread throughout the abdomen. She improved under treatment but then the pain became localized in the bladder with tenesmus and painful micturition. The urine contained fecal matter and the fifteenth day an arcaris, 16 cm. long, came out through the urethra. She improved after this but still had pain in the right flank and lumbar region radiating down to the bladder. Slaviero's diagnosis is that a tuberculous process exists in the intestine and had opened a passage into the bladder which has since closed. In the third patient the symptoms were sudden severe delirium, with hallucinations. It came on without fever or pain and lasted for several hours with a few brief lucid intervals. Then consciousness returned and the boy complained of oppression in the epigastrium. After a dose of calomel several ascarides were passed and the nervous symptoms subsided. A few months later the same toxic syndrome of acute, transient delirium developed anew and yielded again to a vermifuge.—*The Journal of the American Medical Association.*

Typhoid a Preventable Disease.

A recent foreign report shows that the British government is about to make inoculation against typhoid fever obligatory in the army. The step taken is one pleasing to the medical world at large in that it is a public acknowledgement of the value of medical investigation upon practical lines in the way of preventive measures.

The one distinct lesson involved, the one great idea which our cities, and more especially the rural districts have failed to grap, is that typhoid fever is essentially a preventable disease. It is fairly common among smaller towns and rural districts. There's the shame. Like many another propaganda the value lies not in reading it in plain A, B, C; the availability lies not in implicitly believing it, but in converting dollars into protection for our citizens! It is a view of general acceptance, that young people in such districts die of typhoid fever because of the shortsighted policy of economy among county commissioners in neglecting to provide funds whereby their districts may be made typhoid proof. It is a slur, a stigma upon the name of any community, in the light of modern teaching, to be compelled to record a death occurring from typhoid fever.—*The Medical Herald.*

Cinnamon Oil for Warts.

Rosenberg (*Ellingwood's Therapeutist*) states that he has the best results from cinnamon oil. Applied to the head of the wart as an escharotic it causes a little heat, no burning, no scab and no scar. The excrescence disappears without soreness or any inconvenience.—*The Medical Brief.*

Causes of Sudden Death in the Water.

None of the reasons heretofore adduced to explain sudden death in swimmers is completely satisfactory. One of these has never received the attention which it merits. In 1881 von Troltsch asserted that in a number of such accidents death was due to vestibular irritation as a result of the penetration of cold water into the ear. To offset this view, however, is the common observation that children with large perforations of the drum head swim and dive with impunity, and this despite the fact that otitis from bathing is by no means rare, and that old otitides are lighted up by the same exposure.

At a meeting of the Berlin Otological Society held last spring (*Berliner klinische Wochenschrift,* August 10), Güttich reviewed the view that sudden death can follow vestibular irritation in swimmers with perforated ear drums. In those under water caloric mystagmus is set up, and this is followed by Barany's muscle reaction which renders the patient helpless—he can neither swim nor reach the surface. He makes motions, but there is complete loss of orientation. A second rotary reaction now occurs, the swimmer turning on his own axis. If these reactions are for any reason in abeyance, the patient may still suffer fatal collapse accompanied by vomiting.

While this accident menaces chiefly those with perforated ear drums, it could readily, in divers, follow an acute traumatic perforation in the water and perhaps occur exceptionally with intact drum head. Sudden helplessness in the water is better explained as a vestibular phenomenon than by the view of total or subtotal tonic cramps, affecting the respiratory muscles. However, if the patient first becomes helpless when his head is above water the vestibular explanation will hardly answer.—*Medical Record.*

Pathology and Etiology of Duodenal Ulcer.

Although as a rule readily diagnosed, Wilkie says, a chronic duodenal ulcer may occasionally exist and give rise to none of the characteristic symptoms, the first evidence of such a "silent" ulcer being sometimes its perforation. "Silent" duodenal ulcers are met with most frequently in the subjects of arteriosclerosis, and are found for the most part on the posterior wall of the duodenum. Some toxic or irritative factor usually within the abdomen and most frequently associated with the colon or appendix, is found in a large proportion of cases of chronic duodenal ulcer.

Wilkie suggests that probably many acute duodenal ulcers are primarily follicular ulcers from the breaking down of inflamed lympth follicles. Whatever be the primary cause of a gastric or duodenal ulcer, spasm of the muscular coats of the viscus is an

important factor in determining its chronicity. The situation of the opposing ulcers on the anterior and posterior walls of the duodenum on the boundary zone of the areas supplied by the anterior and posterior branches of the supraduodenal artery suggests that a common vascular deficiency rather than a contact infection accounts for the peculiar tendency to chronicity and recurrence.

This vascular deficiency, Wilkie believes, may be due to arteriosclerosis, but probably it is usually due to spasm of the muscular coats of the duodenum induced by a slight local anemia consequent to strain on the supraduodenal vessels, this muscular spasm being favored by the increased vagotonus and the irritable condition of the autonomic nervous system which exists in such cases. The sex incidence of duodenal ulcer is explained by Wilkie on anatomic grounds. The relatively high pylorus and short fixed duodenum of the male allows of its vascular supporting ligament, the hepatoduodenal ligament, being exposed to strain, which in the female, with her relatively low pylorus duodenum, is borne by the left border of the gastrohepatic omentum and lesser curvature of the stomach. The fixity of the male duodenum further predisposes to kinking at the first duodenal angle, and thus to an unduly long exposure of its first part to the acid chyme from the stomach, undiluted by bile or pancreatic juice, the regurgitation of which is impeded.—*The Journ. of the Am. Med. Assn.*

Inherited Defects Attributable to Alcohol.

The influence of alcohol as a detrimental factor in inheritance is one which has not readily lent itself to convincing experimental proof in the past. During the last four years Professor Stockard of the Cornell University Medical School in New York City has been engaged in a study of the effects of alcohol in heredity. He has demonstrated conclusively that the germ cells of males can be so injured by allowing the individuals to inhale the fumes of alcohol that they give rise to defective offspring although mated

with vigorous untreated females. The extension of these unique investigations, in which the offspring from the treated animals which reach maturity are usually nervous and slightly undersized, have further shown that the effect of the injury of the germ cells is not only exhibited by the immediate offspring of alcoholized animals, but is conveyed through their descendants for at least three generations. There are many instances of matings followed by negative results or early abortions, stillborn young or defectives. An instructive illustration was afforded in a case in which two of the four young were completely eyeless, the eyeballs, optic nerves, and chiasma being absent. Such defects result, according to Stockard, from the injury originally inflicted on the germ cells by the experimental treatment. Yet this injury may have been received by early generations only. Thus the parents of the anophthalmic guinea-pigs just mentioned were untreated, their four grandparents were also untreated, but their great-grandfathers were all alcoholized and their great-grandmothers were all normal animals. The defective eyes of descendants are due to impaired development, not to the direct action of alcohol. Plainly the spermatozoön is actually weakened, if not disabled, by the alcohol treatment and all individuals arising from combinations involving such a germ cell are likely to be below normal. There is food for reflection in these facts.—*Journ. of Am. Med. Assn.*

A Case of Ectopia Vesicae in which the Ureters were Grafted Successfully Into the Rectum.

Simpson (*British Medical Journal,* June 5, 1914) reports the case of a girl aged eight years, successfully treated. Under a general anesthetic he dissected up the posterior bladder wall from the peritoneum above and triangular ligament below. A catheter was inserted into each ureter, which was cleared for about two inches; the redundant portion of the bladder was removed except just around the ureters. Simpson next proceeded to divide some fibrous tissue in the position of the hymen admitting the finger into the vagina, and then divided the triangular ligament, per-

mitting the lower end of the ureters to be turned back into the vagina in close proximity to the anterior rectal wall. With a finger in the rectum an opening was made through the posterior vaginal and anterior rectal walls, and through this the catheters and ureters were placed; the free edges of the rectovaginal incision were sutured to the sides of the ureters, the triangular ligament, perineum, and abdominal wounds were respectively drawn together with catgut. Urine was collected in a receptacle for seven days from the two catheters which protruded from the anus; they were then withdrawn, and the patient made an uninterrupted recovery.

She is now able to run about, attend school, and retain her urine in the rectum for several hours at a time.—*Therapeutic Gazette.*

OBSTETRICAL

Pituitary Extract in Obstetrics.

Brodhead, in the *New York Medical Journal* of June 27, 1914, says he believes that the extract, when used intelligently, in the absence of disproportion and with good cervical dilatation, is a very valuable and a comparatively safe therapeutic agent. The fetal heart must be carefully watched, and chloroform should be at hand to relieve violent contractions, with forceps ready for instant use. The extract gives satisfactory results, as a rule, and is well worth a trial in properly selected cases. He has usually given one cubic centimeter as the initial dose, repeating it every twenty minutes, if necessary, until three doses have been given. If three injections fail, he has discontinued the use of the extract.

In Cæsarian section he has injected the extract immediately before making the incision, with excellent results. The uterus contracts well, and the operation is made easier because of the comparative absence of hemorrhage.

For postpartum hemorrhage he has never relied upon the extract alone, always combining it with ergot. He has no reason to

doubt, however, that the quick action which is obtained in the use of the extract is of undoubted value in the treatment of this variety of hemorrhage. The use of the extract as a galactagogue has never appealed to Brodhead as being practicable, and he has never used it for this purpose. For retention of urine, some observers have praised the extract highly, but in the few cases in which he has tried it the result has been *nil*. So strongly is he opposed to the use of the catheter in the puerperium, however, never using it until every other known expedient has failed, that he intends giving the extract a further trial. Whether pituitary extract would possess any advantage over ergot for use under these circumstances he is unable to state.—*Therapeutic Gazette.*

Tumor at Meatus Urinarius in Female.

According to Tenney there are six conditions under which tumor may appear at the female meatus. Papillary adenoma—dysuria pain with physical contact, sometimes slight bloody staining. Not larger than 1 cm., and usually smaller, usually single, varying shades of red, attached on one side of canal and usually the posterior, uncommon, except between 15 and 40 years rarely malignant, frequently recur after removal. Prolapse of dilated ureter —dysuria, pollakiuria. Tumor cyst like a flaccid mucous membrane, "size of thumb" or less appearing either within a few weeks of birth or after months or years of vesical irritation and one-sided symptoms. Probe can be passed all around the pedicle except for one spot. Sometimes mouth of ureter can be identified. Constant tenesmus. Prolapse of bladder tumor—hematuria, dysuria, pollakiuria. Size and structure must vary. Rare in children. Tumor follows long train of bladder symptoms. Prolapse of urethra—symptoms like papillary adenoma except for absence of pain and tenderness. In one case came out ⅝ of an inch. Prolapse of bladder mucosa—only recorded case had symptoms corresponding to intravesical stricture and dilatation of ureter followed by appearance of a fold of mucous membrane at the meatus. Prolapse of bladder wall—pain, tenesmus, spasm and in-

continence at intervals preceding appearance of tumor. Tumor "size of cherry" to "size of ducks's egg," tender, purple, pyriform in shape, bleeding on handling. Sometimes ureteral orifices can be identified on the back of tumor. May be reducible or not. May occur in infants as results of imperfect sphincter apparatus or in adults after injury to same.—*The Journal of the American Medical Association.*

Myoma and Pregnancy.

Landau thinks that physicians as a rule are too apt to regard myomas in the uterus as of comparatively little moment. In a case reported in detail a physician consulted by a young woman contemplating matrimony advised her that the uterus was in such a myomatus condition that pregnancy was out of the question and she would have to tell her fiance this, but otherwise she need not worry. This idea that pregnancy is impossible in an extremely myomatous uterus and that the sterile are inclined to myomas must be abandoned. On the other hand, the numerous apparently normal deliveries with myomas and the cases of successful enucleation of myomas during or after delivery show that the complication of a pregnancy with myomas is not very much to be dreaded. In the present case the woman became pregnant immediately after her marriage and the myomatous uterus was amputated at the third month. It weighed nearly 12 pounds. Landau adds that all recovered of his fifty-one patients requiring operative treatment of a myomatous pregnant uterus, and that the mortality in his total of 544 cases of uterine myoma was 1.8 per cent.—*The Journ. of the Am. Med. Assn.*

Vomiting of Pregnancy.

In nearly every case of pregnancy, says McChesney, in the *Medical Council*, "morning sickness" must be taken into consideration. Not satisfied with current teaching upon this subject,

especially in the more severe cases of all-day vomiting, I have given considerable thought to the problem of relief.

The abnormal sensitiveness of the stomach I find to be sometimes mitigated by the ingestion of some simple food—a cracker, toast, hot tea or coffee—before raising the head from the pillow after awakening in the morning, and then remaining quiet for some time. But this alone did not cure the condition, and often did not even relieve it.

Reflex irritation from the growing uterus being the prominent factor, I instruct my more severely affected patients to assume the knee-chest position when retiring; then inserting two fingers into the vagina, make traction upwards allowing the admission of air to distend the vagina and elevate the womb. This, by taking pressure from the surrounding parts, minimizes the reflex irritability. To this procedure I add the light lunch mentioned, with the further admonition very slowly to assume the erect position. This treatment has yielded very satisfactory results, it being rare, indeed, to find a case in which it had to be persisted in beyond the fifth month.

Simply treating the stomach is not sufficient in these cases; the uterine reflex irritation must also be relieved.—*Medical Brief.*

Placenta Previa.

Nagel, in the July issue of *Surgery, Gynecology and Obstetrics,* in an excellent article on placenta previa, agrees with Doderlein that abdominal Cesarean section has an average maternal mortality of 8.9 per cent, and a fetal of 33 per cent. He quotes the same author in giving seven contraindications. "(1) Infection from the patient herself; (2) fever; (3) examinations made by physicians and midwives before admission to the hospital; (4) tamponade; (5) excessive hemorrhages; (6) marginal insertion of the placenta, because in this case the patient can be confined in a simple manner; (7) in cases where the fetus is either dead or viable, amounting to about 50 per cent of hospital cases." He says that after eliminating these seven contraindications very few remain for Cesarean section.—*Cincinnati Medical News.*

Postpartum Hemorrhage and Puerperal Infection.

The relationship between the acute anemia which follows postpartum hemorrhage and child bed fever seems never to have received due consideration. In the large maternities the incidence of both conditions has been greatly diminished. When hemorrhage does occur, as from retained placenta, manual extraction possesses possibilities of infection which do not depend on the blood loss. At the annual meeting of the Medical Section of the Schlesische Gesellschaft fur Vaterlandische Cultur, Breslau (*Berliner klinische Wochenschrift*, August 3), Bondy made a statistical report on this important subject. In a series of 9,000 labors he found 120 cases in which the loss of blood exceeded 1,000 c.c. Of this number, twenty-four, or one-fifth, were associated with manual detachment of the placenta, and there were 10 cases of the latter uncomplicated by hemorrhage. An important distinction exists between spontaneous and assisted labor. In the former losses of blood even up to 1,200 c.c. were associated with but a slight increase of morbidity, but in losses beyond this limit a considerable increase resulted. Morbidity in instrumental delivery was notably higher than in spontaneous labor, first in losses up to 1,200 c.c., and second, proportionally, in greater losses. Manual detachment with great loss of blood causes a higher morbidity than the same with smaller losses. In general, notable blood loss is an indirect factor in puerperal morbidity.—*Med. Record.*

The Treatment of Hemorrhagic Disease of the New-born by Direct Transfusion of Blood.

Lespinasse, in the J. of the A. M. A., June 13, 1914, reports fifteen cases with no death due to the transfusion; two babies died, however, a few days later from congenital lues. In the donor the blood vessels used were the radial artery in seven cases and a forearm vein in seven cases; on the baby the femoral vein in four and the jugular in ten; the duration of the transfusion was from five to fifteen minutes.—*Buffalo Medical Journal.*

Editorial

PUBLISHER'S NOTICE—The Journal is published in monthly numbers of 48 pages at $1.00 a year, to be always paid in advance.

All bills for advertisements to be paid quarterly, after the first insertion of the quarter.

Business communications, remittances by mail, either by money order, draft, or registered letter, should be addressed to the Business manager, C. S. Briggs, M. D. corner Summer and Union Streets, Nashville, Tenn.

All communications for the Journal, books for review, exchanges, etc., should be addressed to the Editor.

CHRISTIAN SCIENCE AND OSTEOPATHY.

All of our readers know full well the dangers of Christian Science and Osteopathy. They also know that in certain selected cases, *intelligently used*, they are both of service in curing. The danger in the practice of these pseeudo-sciences is that the majority of those using them do not control their use by a thorough knowledge of anatomy, physiology, pathology and all those other branches of medical science with which the modern physician is familiar. Physicians know that Nature is, and ever will be, their greatest aid in curing any disease, and it is only by delving deeper into her mysteries can we hope to even simulate some of her wondrous cures, but Nature can be aided, not only by the mind, as Christian Scientists claim, nor only by certain physical manipulations, as the Osteopaths claim, but also by medicines, surgery and other therapeutic measures.

I am lead to call your attention to these evils in our midst by a case which recently came under my observation. I was called in by the husband to see his wife, a Christian Scientist, who was six months pregnant, because of persistent vomiting and a severe headache which the Science couldn't relieve. The whole family knew that something serious was the matter, but the woman would not have a doctor until the pain became so severe she could not endure it. To make a long story short, the patient had her first convulsion ten minutes after I arrived, lost the much desired

child several days later and had a mild grade mania which lasted several weeks. In this case the mother's life was endangered, her nervous system was severely shocked and the child's life was lost. All of this might have been prevented had she had a doctor when the vomiting and headache first commenced. This is one case. I could recite others, and you know of others. Such things should not be allowed to exist and the profession should take steps to take the practice of these Sciences from all except those prepared to practice them. If we are going to have Christian Science, Osteopathy, faith-healing, etc., in the State, then let us see that those who practice these sciences have doctors' degrees so that they can intelligently choose the cases suitable for such treatment.

MARRIED—At Nashville, October 7, 1914, Dr. Samuel S. Briggs of Nashville, Tenn., and Miss Kate Rowland of Cartersville, Go.

Reviews and Book Notices

"The Clinics of John B. Murphy, M.D." at Mercy Hospital, Chicago. —Vol .III, No. 2. Octavo of 213 pages, 55 illustrations. Philadelphia and London. W. B. Saunders Co., 1914. Published Bi-Monthly. Price per year, paper, $8.00; cloth, $12.00. W. B. Saunders Co., Philadelphia, London.

Our thanks are due the well known publishers, W. B. Saunders Co., for a copy of The Clinics of John B. Murphy, M.D., Vol. III, No. 2. This series of publications presents to its readers, in attractive form, surgical matter of the most interesting kind. Dr. Murphy is recognized everywhere as a progressive surgeon and as a successful teacher, and his advanced work in all departments of surgery has attracted the attention of surgeons all over the world. The lectures published in this form makes the series of peculiar value to its readers who may thus receive clinical instruction from a master hand while not enjoying the greater privilege of being hearers. We may mention among the contents of this number: Murphy's Clinical Talks on Surgical and General Diagnosis; Three Cases of Ectopia Tests; Cholelithiasis, etc.; Acute Pancreatic Cyst; Duodenal Ulcer, etc.; Vesical Papillomata; Internal Hemorrhoids, etc. Quite a number of other subjects are treated of in this number equally interesting, all going to show the immense surgical field covered by the distinguished lecturer in his work. Everyone who has to do with surgery in any way will find it to his advantage to procure this work.

"Practical Therapeutics"—Including Materia Medica and Prescription Writing, with a Description of the Most Important New and Non-Official Remedies Passed Upon by the Council of Pharmacy and Chemistry of the American Medical Association. By Daniel M. Hoyt, M.D., formerly Instructor in Therapeutics, University of Pennsylvania; Assistant Physician to the Philadelphia General Hospital. Second Edition. Revised and Rewritten. St. Louis. C. V. Mosby Co., 1914

This is a most valuable handbook for the general practitioner, serving as it does as a work of ready reference for practical in-

formation. As the author states in his preface: "The purpose of the book is to present a brief summary of the physiological action of drugs, with particular emphasis being given to their clinical application; to show the importance of simple, rational prescribing, based (wherever possible) on known physiological action and to indicate the limitations, as well as the value of drugs, in the treatment of disease." The author has succeeded admirably in carrying out his objects and has succeeded in adding to medical literature a really valuable asset. In this edition such changes and additions have been made as were demanded by the progress of medicine.

"Local Anesthesia"—By Dr. Arthur Schlesinger (Berlin). Translated by F. S. Arnold, B. A., M. B., B.Ch. (Oxon.) Illustrated. New York. Rebman Co., Herald Square Building, 141-145 West 36th St.

We owe thanks to Rebman Co. for a copy of this valuable little book and take great pleasure in recommending it to our readers as the last word upon a most useful surgical procedure. Local anesthesia is steadily widening its area of usefulness and as methods of employing it are gradually perfected is acquiring the fullest confidence of surgeons in its usefulness. In this volume the technique of local anesthesia is laid down in the most satisfactory manner, the simplest and most practical methods being put before its readers. We urge upon every physician interested in local anesthesia to possess himself of a guide that will prove of invaluable assistance to him in operative work.

Publisher's Department

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Original Communications

A. C. E. AS AN ANESTHETIC.*

BY W. T. BRIGGS, M.D., NASHVILLE, TENN.

I asked as a special favor to read a paper on A. C. E. anesthesia as a part of the symposium on anesthetics because I have had more experience with this anesthetic than any other and for that reason can give some reasons why, for many cases, this mixture is better than either ether or chloroform alone.

A. C. E. is a mixture of Alcohol 1, Chloroform 2, Ether 3, having a fruity, not disagreeable odor. Since it is a mixture and not a definite chemical compound the different ingredients volatalize with different degrees of rapidity. This and other mixtures are used a great deal in England and on the continent but very little in the United States. The different boiling points of the ingredients in these mixtures has lead to the following criticism by H. A. Hare in his textbook on Therapeutics. "The object of all these mixtures is evident—namely to get the anesthetic affect of the ether and chloroform without the cardiac and respiratory effects of ether, and the alcohol when added is to act as a stimulant. As the volatility of each ingredient varies, the mixture is

*Read before Nashville Symposium Society, November 5, 1914.

useless, for the ether evaporates first, and the chloroform next, and the alcohol last."

While I have the greatest respect for Prof. Hare, I certainly can not agree with him either in the statement that the mixture is useless, or the objection he raises to the different degrees of volatility. If the bottle containing the mixture is thoroughly shaken every few minutes during the operation, each drop is composed of the ingredients constituting the mixture in the proportion 1-2-3, and while any one drop may volatilize so that the patient inhales much more ether than chloroform and alcohol, it stands to reason that with the mask dampened with the mixture, the patient is constantly receiving the vapor of all the ingredients, and since ether constitutes half of the mixture and volatilizes more rapidly, the patient breathes more ether vapor than either of the other two, and that is exactly what is desired. If it had been the intention of those who first formulated this mixture for the patient to receive as much chloroform and alcohol as ether, then it would have been easy for them to have made the proportions different. While the patient receives more ether than either chloroform or alcohol, because the ether is not only in larger quantity but volatilizes more rapidly, it must not be forgotten that both chloroform and alcohol vapor are being inhaled and play a role in the anesthesia.

Note again, that Hare says: "The idea is to avoid the cardiac and respiratory effects of both ether and chloroform." It seems to me that the ether is used not only for its anesthetic effect but also because of its atom of oxygen which is a cardiac and respiratory stimulant. It is this pronounced stimulation produced by ether that contraindicates its use in certain cases. If this stimulation is neutralized by the depressing effects of chloroform it stands to reason that we can use A. C. E. in certain cases where straight ether is distinctly contraindicated. If A. C. E. is not used, then straight chloroform should be the anesthetic, for everyone who has studied anesthetics at all knows that there are certain cases in which straight ether is absolutely contraindicated.

Since Hare says the mixture is useless, I imagine he means the narcosis resembles either that of straight chloroform or ether

and not a narcosis different from both. As a matter of fact the narcosis is an individual narcosis in which some of the bad points are eliminated from both an ether and chloroform narcosis.

Because of the different degrees of volatility of the ingredients it has been said that A. C. E. carries with it all the dangers of straight chloroform and none of its advantages! In other words, the narcosis resembles an ether narcosis but the dangers of sudden death are just as great as if straight chloroform were being used; furthermore, the main post-anesthetic dangers of both drugs remain.

Since the amount of both ether and chloroform used in an ordinary A. C. E. narcosis is unusually small the dangers of post-anesthetic complications are minimized since these sequelae depend to a great extent on the fact that whether ether or chloroform is used, relatively large amounts are required. When A. C. E. is used neither ether nor chloroform is taken in amount large enough to ordinarily cause postanesthetic complications. The average amount of the mixture required for an hour's narcosis from the first drop administered until the mask is removed, is not over three ounces. Since this is given by the drop method on an open mask, which during most of the anesthesia, especially the first part is held away from the face, the actual amount is really less than three ounces. In other words, 1½ ounces of ether, when given in the A. C. E. mixture, means less ether than 1½ ounces of ether when given alone, since when ether is given alone, most anesthetists hold the mask close to the patient's face and often cover most of it with a towel in order to prevent the vapor from escaping. Of the three ounces of A. C. E. fully 1-3-½ of the whole amount is used to narcotize, the remaining part sufficing to hold the anesthesia. Of course anesthesia could be produced quicker and a smaller amount of the mixture used, but it is safer to hold the mask somewhat removed and allow 10-15 minutes before the surgical stage is reached, since the mixture contains chloroform, and I think statistics show that most chloroform deaths occur early in the anesthesia. A. C. E. can not be handled like ether, and it is the disregard of this fact that has lead many to give it up after giving it a short trial.

Of all kinds of anesthesia, that produced by chloroform is the most perfect, but it is also the most dangerous, except in certain cases where ether, nitrous oxide or nitrous oxide combined with oxygen are distinctly contraindicated.

In using A. C. E. the idea is to produce an anesthesia similar to chloroform but free from most of its dangers, and as contrasted with ether narcosis A. C. E. resembles that of chloroform in the following respects:

1. Complete anesthesia is produced more rapidly than with ether.

2. The stage of excitement is hardly noticeable.

3. Relaxation more complete than with ether.

4. Stertorous breathing not often present.

5. Small amount necessary to narcotize the patient and only a small amount necessary to keep patient in that condition.

6. There is less mucus and tongue swallowing. I never have to sponge out the throat nor use tongue forceps.

7. Postanesthetic nausea and vomiting less than with ether.

8. Lessened danger of the post-anesthetic complications of ether such as pneumonia, thrombophlebitis, anuria, insanity, apoplexy, etc.

A. C. E. is safer than straight chloroform, because:

1. Very little chloroform is used.

2. The oxygen atoms in the ether and alcohol are stimulating to both the circulation and respiration.

3. The post-anesthetic complications of chloroform, such as fatty degeneration of the liver, heart and kidney are not so likely to occur, since these pathological changes are toxæmic, the amount of the toxæmia being more or less proportional to the amount of chloroform used.

Others taking part in this symposium have impressed upon you the fact that all general anesthetics are dangerous and that there is not one amongst the long list but what has its drawbacks. The main drawback to the use of A. C. E. is the fact that it contains

chloroform and because of that ingredient is somewhat more dangerous than ether. In our work at the infirmary, A. C. E. has been the anesthetic of choice for twenty-two years and so far we have had no occasion to give it up. However, during that time nitrous oxide, ethyl chloride, ether and chloroform have been used and will be used in certain cases. No one anesthetic is suitable for all cases. We have used A. C. E. more than any of the others, simply because it seemed to be the best anesthetic in the greatest number of cases and not because there has been any prejudice against the other drugs.

Selected Articles

AMPUTATION OF CERVIX FOR BILATERAL LACERATION AND CYSTIC DEGENERATION — STERILITY DUE TO ANTEFLEXION OF THE UTERUS, DUDLEY OPERATION.

BY RALPH WALDO, M.D., F. A. C. S., NEW YORK.

Case 1. This patient is twenty-seven years of age. Two years ago she gave birth to a child after a severe instrumental delivery. There was a bad laceration of the perineum at the time, which was repaired with good results. The cervix was also lacerated, but was not repaired. It is good surgery to repair the perineum immediately following delivery, and not to wait for the expulsion of the placenta if it has not come away spontaneously just after the birth of the child, for after the delivery of the placenta there is a good deal of blood which is often quite annoying. The delivery of the placenta over the repaired perineum does not injure it. A great many suture materials are used for perineorrhaphy, but my experience leads me to prefer chromic catgut No. 2. This stays in the perineum as long as a suture should be left there; it is soft, does not scratch or irritate the patient, nor cut the tissue. In a general way, the deep stitches, passed from the integument on one side all the way around the rent and out at the opposite side, are sufficient to hold the parts in apposition. A three-inch full curved Hagedorn needle is generally used. Sometimes the rent extends so far up the vaginal wall that it is necessary to place a number of stitches well up in the vagina, and these should be so inserted as to secure a good approximation. Great care should be taken not to draw these sutures too tight or they will cut. It must also be borne in mind that in closing the perineum immediately following a laceration, there is always considerable

edema for the first week after delivery, and if the stitches are drawn too tight they are bound to cut and in some instances to cause sloughing.

Formerly, there were differences of opinion as to whether or not the lacerated cervix should be repaired at once, but it was found that if it was large it was very apt to retract away from the stitches and to give a bad result. It was also found that the percentage of cases of sepsis was very much increased by the immediate operation, so that at the present time the only cases in which it is done are those attended with severe hemorrhage. This can best be arrested by passing chromic catgut so as to control the bleeding vessel.

This patient made an apparently good recovery from her delivery and the perineum united well; but she has not been in quite as good condition as she was before. She has complained of a bearing down pain in the lower portion of the abdomen, has had pain in her back, has been nervous, has had a decided increase in her menstrual flow, and on several occasions has menstruated once in two weeks rather than once in four weeks, which was her former habit.

On examination I find a bilateral laceration of the cervix, with marked eversion. I also find a large uterus with more or less discharge from the canal, showing that there is a chronic metritis, and evidence of hypertrophic endometritis. I am led to this diagnosis by the increase in the menstrual flow.

We will place this patient under ether narcosis, and as the apparatus usually employed for this purpose is out of order, she is instructed to keep her mouth closed during the administration and also to clasp her hands together. You will notice that she goes under the anesthetic without any appearance of discomfort. The hands are clasped so that in attempting to grasp things with either hand, it simply has hold of its fellow. A very important point is to insist upon the patient keeping her mouth closed, for if it is open any sudden inhalation will carry the ether directly into the pharynx, with resulting spasm of the glottis, which produces the disagreeable symptoms which so many patients complain of in taking this anesthetic. This will not take place if the

mouth is kept closed and the ether is allowed to pass in through the nose. It makes no difference what kind of inhalation apparatus is used provided you give the patient the pure vapor of ether instead of the ether only partially vaporized.

This patient is placed on her back and the external parts and the vagina thoroughly washed with green soap and sterile water. Gauze is used for this purpose and not a brush, which is apt not to be sterile and in many instances irritates the patient, and in other instances is too soft to be of any use. The parts are thoroughly washed with sterile water and soap. We are very careful to protect the meatus urinarius from direct contact with any soap. If that is not done, there is apt to be a urethritis, and the catheter will be more often required after the operation. After the parts have been thoroughly cleansed and all the soap has been thoroughly removed with sterile water, the urine is drawn and the parts again washed with sterile water.

Now, with the patient on her back and the legs drawn up, we introduce a speculum and find a very characteristic picture. There is a bilateral laceration of the cervix, more marked at the left, with a number of cysts showing just within the cervical canal and also on the lips of the cervix. The cervix is patulous, and a number of granulations are present. On careful examination it is found that the laceration is very extensive. I introduce a dilator and stretch the internal os, and find that there is a cyst that can just be seen in the upper portion of the cervical canal. I explore the interior of this uterus with a dull Thomas curette, and find it four inches deep. After a thorough exploration with the dull instruments, I use a Sims' sharp curette. This is not, strictly speaking, a curetting instrument, but it is sufficiently sharp to effectually scrape the interior of the uterus. A number of granulations are thus removed, but not so many as we have in many cases. I perform the amputation of the cervix that was devised by Marion Sims. This operation is indicated in a woman over forty years of age. Trachelorrhaphy at this time of life is seldom very satisfactory. There is free hemorrhage, and once in a while I cut into a cyst. The cysts aré well up in the cervical canal.

This is one of the most marked cases of cystic degeneration of the cervix that I have seen. Now, I have performed a circular amputation. In this case, owing to the cystic degeneration, it is necessary to sacrifice much more than is usually required. The first suture is passed on the left side, close to the uterus, and by tying this you notice we stop the profuse hemorrhage. Formerly, many methods were devised for arresting it. One of these is an elaborate tourniquet for the cervix itself, but it has been found that the proper application of the suture is all that is required. It is very necessary in these cases to stitch the cervical mucosa to the vaginal mucosa. The needles are the full curved cervical needles devised by Emmett, the best that have ever been used for this purpose. I have introduced two chromic catgut sutures posteriorly, stitching the cervical mucosa to the vaginal mucosa, and now I am introducing two more. There are two anterior, two posterior, and two at each side, making eight in all; more than these are rarely required. In operating on the cervix, the stitches should be drawn tight. This is not the case with the perineum. You will notice now that the sutures are all placed anteriorly, posteriorly, and on the left side of the cervix. It is not necessary to bring the cervix down. I now introduce the chromic gut on the right side. Again, this takes three stitches to close the wound. Before cutting off the sutures, I will pass the sound into the cervical canal. The external os is larger than in a normal uterus, and you should always leave it larger, because as involution takes place the cervix contracts with the rest of the uterus, and the os finally is of the size that it should normally be; otherwise it will be found too small five or six months after the operation. One year I operated on an average of once a month for stenosis of the cervical canal following operation on the cervix. This is apt to take place where great care is not taken to unite the cervical and the vaginal mucosæ together. During the last two or three years, I have not seen so many cases as formerly. I think this is due to the fact that surgeons now generally recognize the importance of this procedure.

Following this operation it is very necessary to tell the patient that she will derive very little, if any, benefit until the expiration

of three or four months after its performance. Within a few days they may experience a good deal of relief, due to the local blood-letting at the time of the operation, but all the disagreeable symptoms—pain in the back, dragging down, etc.—return; and unless these patients are warned of this fact they may be very much discouraged. I have known of instances where they have gone to some quack and taken a patent medicine, and have attributed their eventual recovery to this and not to the well-performed operation on the cervix. At the expiration of six months they will be much benefited, and will continue to improve for a year following the operation. This is due to the fact that it is performed for the cure of the subinvolution of the uterus, not for esthetic reasons, and the symptoms will not disappear until the uterus has returned to its normal size.

The question frequently arises whether in subsequent pregnancies these lacerations will recur. If you perform this kind of operation on the cervix and are careful not to constrict the canal too much, the patient is no more liable to a cervical laceration than if it had never been done. I have seen a very large number of these women who give birth to children without any damage to the cervix, although there had been an extensive laceration which had been repaired. This is also true of many lacerations of the perineum. The fact is that where the cervix or perineum is properly repaired, the liability to laceration is not as great as in the ordinary primipara.

The after-treatment of these cases is very simple. If the patient suffers a good deal of pain, she is given small quantities of morphin, hypodermically, usually 1-6 grain, and it is seldom that she receives more than one or two doses; frequently not that. If the patient wishes to pass urine, she is allowed to do so; if necessary, a catheter is used as soon as she complains of discomfort from retention. Many times, immediately following the operation, patients will go ten or twelve hours before the catheter is used. After that time, it usually has to be employed once in six or eight hours, but it is resorted to oftener if there is discomfort. The strictest antiseptic precautions are taken in drawing the urine, and cases of infection of the bladder and cystitis have been mark-

edly diminished since we have adopted as a lubricant for the catheter a 20 per cent solution of argyrol. The cystitis formerly produced by the catheter was not always due to its improper sterilization or to improper washing of the patient, but frequently to germs left in the lower portiton of the urethra and carried from thence to the bladder by the catheter.

If the patient's bowels do not move by the second day, a laxative is given. This is especially true where the perineum has been operated upon; and where there has been a complete perineal laceration into the rectum the greatest care must be exercised to see that the woman has at least three or four evacuations from the bowel every day.

After passing urine or after a movement of the bowels, the external genitals are douched with a mild antiseptic, usually 1-5,000 sublimate solution. No vaginal douche is given until the expiration of about a week; then a daily vaginal douche of the 1-5,000 bichloride solution—not hot but merely warm—will afford comfort. It is not necessary to use an antiseptic douche; sterile water is all that is necessary; but when a mild antiseptic douche is employed you feel sure that it is sterile.

Case II. This patient is twenty-three years of age; born in Russia; marired for two years. She presents herself because she does not become pregnant and wants children. Microscopical examination of the semen from her husband shows numerous spermatozoa, apparently healthy.

She also complains of pain during the first two days of each menstrual period, which is of the ordinary monthly type, the flow lasting six or seven days.

On vaginal examination, marked anteflexion is found to exist. In the strictly technical sense this patient can not be said to be sterile. Theoretically, a woman who has been married for three years and has used no preventives against impregnation, and has never been pregnant, is said to be sterile.

I have seen patients go a much longer time and become pregnant. I remember one in particular, who had been married for fourteen years and had undergone much treatment for sterility. Years after giving up all hope she came to me for what she sup-

posed to be an abdominal tumor—in fact, it was an abdominal tumor, but a physiological and not a pathological one, and she expected me to advise her to have a laparotomy. I told her to wait two months and she would be delivered of a child. She was immensely surprised, but returned to the clinic about three months later with a child in her arms.

There is uncertainty as to the percentage of sterility due to the female and that due to the male. The largest estimate that I have been able to obtain from innumerable statistics is ten per cent attributable to the male. I believe that this is at least twice as large as actually exists. The most frequent cause of sterility is anteflexion. In what proportion of these cases the anteflexion causes the sterility by obstructing the entrance of the spermatozoa is very uncertain. I believe that in a large percentage the sterility is the result of the endometritis caused by the anteflexion rather than of the obstruction caused by it to the fecundating elements. At any rate, the procedure that drains the uterus the best and leaves the most direct cervical canal has, in my experience, resulted in the largest number of cures. I have dilated these case and amputated the cervix, but the largest number of cures have been obtained by me from the Dudley operation on the cervix. This consists in making an incision in the posterior lip of the cervix, extending well up so as to reach the angle of flexion, of course being careful not to open the cul-de-sac and to keep the incision in the uterine substance. The corners of this wound are turned down and stitched, so as to leave a direct cervical canal at the upper angle of this incision, and the turned down lips of the cervix at each side surround this new canal with mucosa, so that it will not again unite.

An old operation, the posterior discision of the cervix, resulted in a certain number of cures, but as the surfaces were not covered with mucosa the wound was found to close in a very short time.

To make the entrance doubly sure, these cervical canals are also thoroughly dilated with a steel branch dilator before this operation is performed. This dilatation is as extensive as the tissues will stand without laceration. The flaps are turned back and stitched with chromic catgut No. 2.

These patients are seldom required to remain in bed over a week, and many of them leave earlier.—*International Journal of Surgery.*

A STUDY OF 150 CASES OF TWILIGHT SLEEP.

BY JACOB HELLER, M.D., BROOKLYN, N. Y.

In considering any measure for the relief of pain incident to childborth, two things have to be proven: (1) That the measure actually does relieve the pain, and (2) that it is free from danger to life and health of mother or child.

That opium and its derivatives, and scopolamine and the whole group to which it belongs, possess in vary degrees, the power so to lower the sensitiveness of the nervous system as to diminish pain or abolish it, has long been an established fact, but that they can be used in combination in such manner as to rob childbirth of its terrors and render it painless or almost so, without interfering with its normal termination was first described by Steinbuchel in 1902.

It was, however, Gauss of Kronig's Klinic in Freiburg, who brought the use of scopolamine-morphine anesthesia in labor prominently before the world. It was also Gauss who gave it the convenient and descriptive name of "Dammerschlaf," or as we call it, "twilight sleep." His first article on the subject, which appeared in 1906 and contained a report of five hundred (500) labors in which twilight sleep was used with relief of pain and perfect safety to mother and child, created intense interest in the subject among medical men, and for a considerable time after numerous reports on the subject appeared in medical literature. Some of the writers, chief among whom were Kronig, Zweifel, Beiruti and Newell, confirmed the observations of Gauss as to its efficacy and safety. Others, particularly Hocheisen, not only denied any great benefit to it, but condemned it as unsafe and dangerous to mother and child.

As has so often been the case, however, in medical research and investigation, the adverse reports were readily accepted as final, with the result that interest in the subject subsided, and, with the exception of Freiburg, where it was adopted as a routine measure, the method was not tried anywhere to any great extent and with any degree of thoroughness.

In May of this year there appeared in a New York lay magazine a sensational article on twilight sleep which brought down upon itself the just criticism of the medical press, but which, however, served the good purpose of reawakening a general interest in the question. It was then that the medical staff of the Jewish Maternity Hospital decided to give the method another and thorough trial if possible. We say another and thorough advisedly, for only an indifferent attempt had been previously made and abandoned for no apparent reason. We were fortunate in having been able to obtain the coöperation of Dr. Kurt E. Schlössingk, a coworker of Krönig and Gauss, who was thoroughly familiar with the Freiburg technique, mode of administration, indications, and contraindications, points so much emphasized by Gauss as essential to the successful application of this method.

Our report is based on the experience obtained in 150 cases drawn from the charity and private service of the Jewish Maternity hospital.

No case was excluded except for one of the following reasons: (1) A marked disproportion between the fetal head and pelvis, requiring in the opinion of the attending, a major obstetric operation. (2) Placenta previa. (3) Absent or doubtful fetal heart sounds. (4) The woman being too far in labor. The last class was excluded for obvious reasons; the first three, because we did not want any accident to mother or child, under such circumstances, to be attributed to the twilight sleep. All minor degrees of pelvic contractions were included, where it was thought labor could be terminated by forceps. So also were included in this series two cases of nephritis with threatened eclampsia, one of which culminated in convulsions six hours after delivery and made a rapid and uneventful recovery, as well as two cases of chronic endocarditis. These two latter were particularly gratifying, go-

ing through their labor without any shock or strain on their hearts. It seems to us that twilight sleep is exceptionally useful in this complication.

Of the series one hundred and thirteen (113) were primiparæ and thirty-seven (37) multiparæ; one hundred and forty-eight (148) presented the vertex and two the breach. Of the vertex presentations there were the usual number of position, thus: 103 were L. O. A., 27 R. O. P., 16 R. O. A. and 2 L. O. P.

Mode of Delivery—Of the total of 150, 131 delivered themselves spontaneously with the ordinary support of the perineum, and 19 were artificially terminated. One by breach extraction and 18 by forceps, 3 of which were medium and 15 low. With a little more patience on the part of the attending physician the number of forceps deliveries could have been reduced to six, for in only six of the cases was there any indication for immediate delivery. The others were done for the convenience of the attending. Kronig lays great stress on the fact that twilight sleep reduces the percentage of forceps deliveries, for the reason that with the pain and the consequent exhaustion removed, there is no risk to let the patient take a longer time to deliver herself.

Separation of Placenta and Bleeding—"What effect has the method on the separation of the placenta and bleeding?" is one of the questions most frequently asked. For, with absence or diminution of subjective pain, it is difficult, for one who has not watched these cases, to conceive of a well contracted uterus. In our whole series we did not meet a single instance where the placenta was retained for longer than thirty minutes, and the average time for its expulsion was about twenty minutes. Nor did we meet a single case in which bleeding was abnormally profuse. In fact, a hemorrhage which might have been expected in 150 labors was here conspicuous by its absence.

Duration of Labors—With very few exceptions, all writers on the subject agree that labor is moderately prolonged by twilight sleep. Siegel, of Freiburg, states that in their experience there is a delay of about one hour for the first stage and thirty-three minutes for the second. Our figures on this phase are rather inconclusive and, if anything, would show a shortening of labor,

for the average duration of labor in the primiparæ of the series was only 8½ hours, obviously too short. The reason for this apparent shortening is the fact that the great majority of our patients are admitted in a fairly advanced state of cervical dilatation, and our records take the time of their admission to the hospital as the time of the onset of labor. Personally, from observations made on a small number of cases that were admitted, that were not in labor, I believe the first stage is actually somewhat shortened, and I attribute that to the softening effect, morphine-narcotine meconate and scopolamine have on the cervix and lower uterine segment. The second stage, however, is positively delayed. The patient being in a semi-conscious state can not be taught to utilize her abdominal muscles to advantage, since the contractions of the abdominal muscles are entirely of voluntary origin.

Conditions of the Mother During Labor and the Puerperium—Half an hour after the first injection the patient usually becomes flushed. The pupils are dilated and the lips parched. She is somewhat drowsy and her pains are markedly diminished. With the second dose her sleep deepens and the uterine contractions are evidenced by a slightly painful expression on her face or by very weak attempt at crying. Her memory, however, is still not much impaired. It is not until after the third injection that her memory is entirely lost. She then fails to remember any object previously shown her or the number of injections given, although she will answer questions quite readily on anything that does not tax her memory. This state continues until the birth of the child, when she falls in a quiet and natural sleep lasting in our patients about three hours. She awakens rested and cheerful, free from any shock or sign of exhaustion, no matter how long the labor lasted. Often the patients asks of the nurse when she will be through with her confinement, and it has been hard to convince her that she is already through without showing her child to her and inviting her to feel her reduced abdomen. The rest of the puerperium was perfectly smooth and normal, so much so that patients were with difficulty kept in bed and many were permitted to get out on the second or third day.

The most troublesome thing encountered by us was occasional restlessness. Particularly was such the case at the beginning of our work when we were rather timid and felt our way slowly, being uncertain of the dosage and the intervals. With gained experience and confidence in the method we were able to eliminate much of the restlessness, and the latter was only rarely evidenced by the patient's moving about in bed and upsetting her aseptic surroundings.

Effect on the Child—The harmful effects of opium and the belladonna group on infants and children being known, apprehension for the twilight child is justified. Many prospective mothers, as well as many physicians, ask the question: "Does twilight sleep have any ill effect on the child?" Of the 152 children (two of the births being twins) not one was born still, that is, failed of resuscitation. Three of the children died within a short time after birth. One, in the eighth month of gestation, with a spina bifida, died three hours after birth; a second died three days later from melena neonatorum with a family history of bleeders, and the third one apparently from subdural hemorrhage. We could obtain no postmortem to verify our assumption and so this death remains doubtful. But even if we should credit it to twilight sleep, the child mortality would be 0.6 of one per cent, comparing more than favorably with the ordinary fetal mortality of 1.5 per cent. The fetal heart *in utero,* which was always watched with the greatest care, never went up above 160 or fell below 120 per minute. One hundred and twenty of the children cried out immediately and spontaneously. In 29 there was an average delay of five minutes, and in only one case, where, owing to great restlessness of the mother, we were compelled to repeat the morphine-narcotine meconate three times, was there a delay of 20 minutes, requiring artificial respiration. This child did not do well for a week; was rather drowsy, did not take the breast, and cried but weakly. It finally, however, made a good recovery. The comparative freedom of the child from the effects of drugs, which so overwhelm the mother, can be explained only by the selective powers of the placenta preventing the greatest part of the drug from reaching the fetal circulation.

Technique—We followed the technique practised at Freiburg without deviation. When it was determined by the effect of the uterine contractions on the cervix and membranes, that the patient was in active labor, she was removed to a dimly lighted room away from the general noise of the hospital. She was placed in a bed prepared for delivery. After her pulse and respiration, the fetal heart, as well as the frequency and duration of the uterine contractions, were observed and noted down on record, she was given an initial injection of 1 c.c. of a 3 per cent solution of morphine-narcotine meconate, which is equal to half a grain of the powdered drug. Through the same needle and without removing it, she was injected with 1.5 c.c. of a 3-1000 of 1 per cent solution of scopolamine hydrobromide, equivalent to 1-1333 of a grain. One hour later a second injection of scopolamine alone, one third-of the original dose, that is, one-half c.c. of the same solution, was given. Half an hour after the second injection the memory test was applied; the patient was asked whether she remembered having seen a certain object previously shown her or the number of injections given her. If her answer was ready and clear she was given another half c.c. of scopolamine at once, if not, we waited with the third injection for the hour. She was then constantly watched, and the injection of 0.5 c.c. of scopolamine repeated on the slightest sign of reappearance of memory until she was delivered. On an average the injection had to be repeated every one and one-half hours. The greatest number of injections given to any one patient was 19, the smallest, one; the average, five. The longest time a patient was in twilight sleep was 25½ hours; the shortest, 45 minutes; the average, 6½ hours. In only a few instances, owing to restlessness of the mother, did we repeat the morphine-narcotine meconate also. Pituitrin we used rather frequently, a little more often than ordinarily. With the birth of the child the cord was rapidly clamped and the child removed whenever that could be accomplished before it cried, so as not to awaken the mother.

Results.—In 122 cases, or 81.3 per cent, we succeeded in obtaining a complete amnesia and an almost equal degree of analgesia. All that occured during the time the patient was under

the influence of the drugs, was wiped out of her memory. In 13, or 8.7 per cent, we got analgesia without amnesia. These were started somewhat too late. Gauss thinks that the ideal case is one in which amnesia is complete. In our opinion, amnesia, while present in the great majority of cases, is not essential. The analgesia case without amnesia seems to us the more ideal, for not only does that labor appear more natural, but the patient can make good use of her abdominal muscles to shorten the duration of her labor.

If fifteen cases, or in 10 per cent, we failed to obtain any marked results. With our present experience it is quite possible to reduce the number of failures to a smaller figure, but since the sensitiveness of the nervous system varies in different individauls, as does the susceptibility to drugs, there will always be some cases that will not be influenced by the drugs unless carried beyoynd the point of safety.

Our small series, then, proves that judiciously used, and with proper precaution, the method is capable of relieving pain in 90 per cent of cases and that it is free from any danger to life or health of mother or child.

Let me say a word about the objection raised against any attempt to relieve childbirth of pain and suffering. It is argued that since nature that encourges propagation in every possible way and manner, could not have been so cruel and inconsistent as to inflict untold suffering on half of the human race, or perhaps on half of living creation, and thus handicap her own work, if she had no distinct purpose in that pain and suffering; and that any interference with that purpose will be resented by her in some manner. Kronig tries to meet that argument by stating that a very great number of our present-day women to whom twilight sleep is particularly beneficial, are so far removed from nature as to make their labor border on the pathological, and therefore, he says, interference is not only justified but clearly indicated.

In our opinion, subjective pain incident to childbirth serves no purpose in nature but is rather an unnecessary result of an unchangeable natural law, that all severe muscular effort is accompanied by pain. The metabolic end-products of muscular activ-

ity are irritating to the nerve ends, causing pain. Thus, we see fatigue following an immoderate bodily exertion, severe pain accompanying the hurried muscular peristalsis of the bowel in ridding the system of injurious material; excruciating colic caused by the expulsion of a biliary or renal calculus, and finally agonizing pain incident to the expulsion of the fetus from the uterus, and in trying to relieve this pain we are not in conflict with a natural purpose, but with an unnecessary and undesirable result of a natural law.—*Medical Record.*

Extracts from Home and Foreign Journals.

SURGICAL

A Method of Opening the Abdomen for Appendicectomy.

Dr. G. H. Edington (*Brit. Med. Jour.*, Sept. 12, 1914) describes a method the underlying principles of which are: (1) Division of the posterior sheath of the rectus transversely, in the direction of the aponeurotic fibers, and (2) preservation of the muscle itself to form a support to the scar. This method consists in exposing the rectus muscle, looseing it in its sheath, retracting towards the middle line, and transverse division of the posterior sheath and peritoneum. After the appendix has been removed and the posterior sheath and peritoneum sutured, the rectus is allowed to fall back into its normal position, and the anterior sheath and superficial wound closed. Edington has performed this operation in close to 100 cases, and where there has been primary closure of the incision the results, as regards absence of hernial protrusion, have been absolutely satisfactory.—*International Journal of Surgery.*

Operative Treatment of Traumatic Stricture.

The literature of the European continent during the last few years has contained many references to the operative treatment of stricture which seeks to replace diseased by healthy tissue either by grafts (Saphenous Vein of Tanton), or by resection of the strictured portion of the canal. The latter method has been applied especially to traumatic strictures. The healthy portions of the urethra adjacent to the stricture at either end are fully mobilized to permit of their easy approximation without undue tension. The scar tissue is then excised and the free margins accurately sutured with fine catgut. As much as 5 cms. of the

urethra have been thus resected (Cochez, *Journal d' Urologie*, IV, 1). Some of the operators guard the healing of the urethral wound by diverting the stream of urine either through a suprapubic cystostomy or through a perineal. Others are content to merely tie in a catheter. The results as a whole are generally reported as quite satisfactory.

My own opinion is that a permanent catheter tied in may do more harm than good, since it is essential that the urethral wound heal by first intention. There is always without fail inflammation about a catheter left in the urethra and the presence of a foreign body only serves to aggravate it. While this is a matter of minor consequence when the catheter is left in order to keep a diseased bladder drained as in prostatic enlargement, yet it is all-important, when the primary healing of an urethral wound is sought. Such a wound breaking down not only defeats the aim of the operation, but may even serve to make the condition worse than it was before.—*Pacific Medical Journal.*

Harness Rivets Removed from Nasal Cavity.

While we frequently remove from the nasal cavity foreign bodies which have been retained a short time, yet it is rare to find them retained so long without the patient knowing it. A boy, aged 7, had always been healthy until two years ago, when he had an attack of 'influenza" lasting several days, at which time there was quite a profuse nasal secretion of a thin, watery nature; the general disorder which had been diagnosed influenza subsided, but the nasal discharge gradually got worse until it became purulent and very foul; nasal douching had little effect; "even the skill of the magnetic healer failed to effect a cure." I first saw the child September 20. He was moderately well nourished, was somewhat anemic and presented the appearance of a child with adenoids. A purulent discharge from the nose was very foul. Careful examination revealed a metallic body in each nasal cavity. These were removed with some difficultyy and proved to be quarter-inch harness rivets. They were considerably corroded, show-

ing that they had been in place a long time. A few subsequent treatments cleared up the trouble nicely and the boy is now able to breath through the natural route. This simply emphasizes the necessity of a careful examination of the nasal cavity and all accessory sinuses in every case presenting with a foul nasal discharge.—*The Journal of the Am. Med. Asso.*

Scopolamin in Anesthesia.

Fonyo thinks that he is justified in drawing the conclusion from his experience with scopolamin in 154 cases that the scopolamin-morphin technic is not dangerous for vigorous and well-nourished patients. But when a not very strong patient has been purged for an operation and is not allowed or does not wish to eat and is not allowed to drink for fear of bringing on vomiting, the organism feels the effect of the drugs much more intensely. Disturbances are peculiarly liable if there is already some derangement in the respiratory apparatus, as morphin seems to act particularly on the respiration center. One of his patients with cancer of the rectum has been given regularly three times a day for weeks a subcutaneous injection of 0.006 gm. scopolamin and 0.02 gm. morphin without any disturbance; she is able to eat and is well nourished. An older, demented woman suffering from hunger and thirst, was given a single dose like the above, fractioned, and fell into a deep sleep, and died with signs of paralysis of the respiration in forty-eight hours.

He relates the details further of two fatalities following operative delivery. Cesarean section was done in one case and pubiotomy in the other. Both succumbed to paralysis of the respiration one hour after the operation which had been done under chloroform preceded by 0.0012 gm. scopolamin and 0.03 morphin. He thinks that the loss of blood and the lack of food as the patients were being prepared for the serious operations were responsible for the unusual toxic virulence of the drugs. He remarks that the mishaps from scopolamin are more numerous since pantopon has been substituted by some for the adjuvant morphin.

Voit and others have calculated that during inanition the skin loses up to 97 per cent of its fat, the liver 70 per cent and the muscles 64 per cent, but the lipoid content of the brain increases. Consequently the brain is larger in proportion than when the organism is well nourished, and this gives greater play to the toxic action of the drugs.—*The Journal of the Am. Med. Asso.*

Gonorrheal Epididymitis.

In treating gonorrheal epididymitis by Bier's method, Wilson (*Brit. Med. Journ.,* Nov. 15, 1913) makes use of a strip of lint 1½ inches wide, a piece of rubber tubing, and a pair of artery forceps. "The cord on the affected side is encircled just above the testicle by the strip of lint, which is continued round between the two testicles along the median raphe of the scrotum. Over the lint is applied the rubber tubing which is tightened to the required extent and secured by the forceps." When properly applied the apparatus should cause an immediately relief of pain with an agreeable sense of warmth. Soon after the application the tissues should assume a purplish color. The treatment should be applied an hour the first day, increasing daily up to eight hours if possible.—*Medical Review of Reviews.*

The X-Ray Treatment of Ringworm.

Oram in the *Liverpool Medico-Chirurgical Journal* for July, 1914, tells us that a year ago an X-ray clinic was instituted by the Education Committee of the Liverpool Corporation, and during the past year 150 children have received treatment. Taking the period from August to December last year, during which period forty-two children came for treatment, 35 of these were cured at the first exposure—i. e., 85 per cent; and the average time which elapsed between the time of their first attendance and their being certified as free from ringworm and able to attend school, was just under four weeks. The other 15 per cent had

to receive a second treatment, and the average time for these between their first attendance and their cure was twelve weeks.

One child developed an eczema of the scalp outside the area treated, and the writer thought it well to discontinue the treatment lest it should be held responsible. Otherwise all cases were cured within the three months' period. The writer knows that no other form of treatment can hold out promise of such speedy or certain results, and when in addition it is considered that the manipulation is carried out entirely by the medical man, and that in a period of about half an hour, and that the coöperation of the parents, which is frequently difficult to obtain amongst the very poor, is not an essential detail, one can not fail to be impressed with the value of this method.—*The Therapeutic Gazette.*

Tarsalgia.

Merrill (*Surgery, Gynecology and Obstetrics,* July, 1914, concludes a well-illustrated article on this topic as follows:

This condition is of static origin, generally combined with a systemic disturbance. The condition of static subluxation of the mediostarsal joint has for its principal factor a contraction and shortening of the posterior tibial muscle, and generally is associated with a depression of tone and power of the anterior tibial.

A fairly constant type of symptoms can be found. The condition usually exists without a frank inflammatory process present, and will yield to prolonged rest or palliative measures, or both.

A certain derangement of relationship of structures in the foot and leg, and perversions of function, will produce a definite type of pain in the tarsus, or tarsalgia.—*The Therapeutic Gazette.*

Cutting Both Phrenic Nerves in Tetanus.

Jehn reports from Sauerbruch's clinic at Zurich a case of extremely severe tetanus in a boy of eight who was suffocating from recurring spasms of the respiratory apparatus, each lasting three of four minutes with cyanosis and unconsciousness. The rigid

thorax and spasm of the diaphragm rendered artificial respiration impossible. After the third spasm of the kind Sauerbruch severed the phrenic nerve on each side through an incision along the posterior margin of the sternocleidomastoid, under ether. The type of breathing altered at once and artificial respiration became possible. The boy had thirty-five severe convulsions afterward, but with oxygen, artificial respiration and a temporary gastrostomy he was tided along to final recovery. The boy shows no ill effects now, four months later; the diaphragm rises and falls mechanically with the breathing. Expectoration proceeds even better than under normal conditions.—*The Journal of the American Medical Association.*

Treatment of Fractures About Elbow Joint.

After reducing the fracture and placing the forearm in the acutely flexed position Hartshorn applies the dressing as follows: 1. The placing of a gauze bandage extending from the wrist to the elbow permitting free movement at the elbow. 2. An adhesive strip is applied as suggested by Scudder, extending from wrist to arm. 3. Starting at the elbow the center of a strip of adhesive plaster 1½ wide and of sufficient length to encircle the forearm and arm is placed posterior to the elbow and its ends brought forward to the anterior surface in the same manner as that employed in strapping the knee joint. A second strip if applied overlapping this one-half. This is followed by more strips of a similar nature, gradually ascending until the forearm and arm have been completely covered both anteriorly and posteriorly. Protected as they are by the gauze bandage previously applied, the adhesive does not at any point come in contact with the skin except at the hand and shoulder. 4. The application of a strip of adhesive plaster 5 cm. wide along the dorsum of the forearm and over the uninjured shoulder. This holds the hand firmly in position. 5. A similar strip of adhesive is then applied around the arm and chest just above the elbow.

The subsequent treatment of the fracture requires: Daily inspection for the first week. At the end of this time the adhesive plaster is removed and passive motion leading toward extension is applied. If acute flexion can be easily regained the dressing is reapplied, reducing the angle of flexion by substituting a muslin or gauze swathe for the plaster, allowing only the adhesive band to remain. This is permitted to stay in place for one week longer, when some form of an external angular splint is applied, which allows adjustment of the angle. After the second week massage and passive motion are employed each second day until both flexion and extension are approximately normal. Daily use of the extremity after the fourth week.—*Medical Record.*

Prognosis in Cancer of the Tongue.

W. Trotter states that operations undertaken for epithelioma in which the diffuse stage has bgun are particularly apt to be followed by early, rapidly growing, and diffuse recurrence even when the type of disease has been recognized, the growth is quite small, and the excision has been very extensive. It can not be doubted, therefore, that in these cases there is a diffusion of cancer cells throughout the tissues around the growth to a distance far beyond the palpable induration and extending into regions which do not display the least abnormality to the naked eye. When, therefore, operations are undertaken for this type of the disease there is no chance of cure unless an extremely drastic procedure is adopted. A radical extirpation of the tongue muscles down to and perhaps including the great cornu and body of the hyoid bone at the least on the affected side is essential, and there is a good deal to be said for total extirpation of the tongue and hyoid bone. The only serious dangers of even the most extensive operations are those due to sepsis, which takes two forms —infection of the lungs and infections of the wound. The former if at all severe leads to abscess formation and gangrene with an almost necessarily fatal result; the latter may lead to acute septicemia or to a cellulitis extending diffusely in the neck, with the

risk of mediastinitis and of secondary hemorrhage. The best precaution, therefore, against lung infection is the abolition of the possibility of aspiration. Local infection can usually be prevented by adequate suture of the wound. Patients with clean mouths and who are habitually careful with them are little if at all less liable to serious complications than those who are careless and whose mouths are obviously septic. Edentulous patients give rise to no serious anxiety on the score of sepsis.—*Medical Record.*

MEDICAL

Erysipelas.

Arneth reviews his experience with several hundred cases of erysipelas. He has encountered a few rapidly fatal cases, among them that of a healthy man between 30 and 40 who died eight days after the onset of severe erysipelas; staphylococci were found in pure cultures in the tissues. In another case a healthy woman of 46 developed erysipelas after removal of a small dermoid cyst on the arm. The erysipelas spread over the whole body and fatal paralysis of the heart developed. In such severe cases all treatment is futile, and in the mild cases spontaneous recovery is the rule whatever treatment is applied. It is important, however, to restrict the spread of the erysipelas and he has never found anything so effectual for this as painting the region and vicinity with a 5 per cent oil solution of phenol. This is applied three or four times a day, leaving the area uncovered all the time. There is no caustic action from the phenol and the tissues are not irritated as by application of salves or dressings. The thin coating of oil softens the skin and works its way in; it relieves the pain and tension and by its anesthetic action tends to subdue the inflammation. In his years of experience with this carbolized-oil treatment he has never witnessed any signs of intoxication from it, and it does not stain the linen. This principle of refraining from irri-

tating procedures and anything that might force the germs into the depths of the tissues, he thinks, should be followed in treatment of all suppurative processes. He refrains from touching even a blister, and never tries to cleanse the erysipelas region until several days after all signs of inflammation have subsided. Then he clears off with olive oil any loose skin, not permitting water for some time yet. Otherwise there is danger of the process flaring up again; still virulent germs might easily be mobilized by any manipulations of the kind. He reviews numerous other methods of treating erysipelas as practiced by about fifty other clinicians, but thinks the phenolized oil surpasses them all in efficiency. Treatment can be only symptomatic but everything that builds up the general condition is a help, sustaining the heart, possibly also whipping up the neutrophil leukocytes. He remarks that it is odd that the diseases with pronounced neutrophil leukocytosis, pneumonia, diphtheria, tonsillitis and erysipelas, do not immunize against future attacks, but instances are known of complete recovery from leukemia after intercurrent erysipelas. , Glaser has reported a case of severe dropsy with subacute nephritis in a boy of 12 who was permanently cured after an attack of erysipelas.—*The Journal of the Am. Med. Asso.*

Tuberculosis in Children.

R. M. Smith, in Boston Medical Journal, emphasizes the distinction between tuberculosis infection and tuberculous disease. Tuberculous infection occurs in many instances without symptoms sufficient to attract any attention and then goes on unrecognized. It may give no signs on physical examination, but usually thoracic and abdominal gland tuberculosis is made evident by the local signs of enlarged glands. There may be chronic enlargement of the bronchial or mesenteric glands from infection with some other organism than the tubercle bacillus. It is necessary to have a positive von Pirquet reaction to make the diagnosis of tuberculosis. The von Piquet reaction may be taken as a safe index to tuberculous infection. The instances in which a negative reaction

occurs in the presence of a tuberculous infection are usually instances which can be explained according to well-known facts. Unless the tuberculous infection is active, it is not a source of immediate danger, either to the individual or to the community. A child with such an infection should be treated, not as a patient with active tuberculosis, but as an individual to be watched carefully, fed properly and put under good hygenic surroundings in order that the disease may not become active. Tuberculous disease means an active tuberculosis. This condition in children starts as a glandular disease, but has a great tendency to extend beyond the confines of its original seat within the gland, and when such an extension occurs there is apparently little further tendency to localization. It becomes at once a generalized process, leading often to rapid death. After the age of ten years, tuberculosis assumes the characteristic of adult tuberculosis, but before that age, the diagnosis must be made on different evidence. The symptoms are usually very indefinite. There is little or no cough and almost never any sputum. The temperature is frequently not greatly elevated, and not more elevated than occurs in infants and young children from a variety of causes. Physical examination in the early stage of the disease reveals nothing other than a child in poor condition with enlarged glands. When the disease extends beyond the glands into other parts of the body the physical signs become more definite. In the lungs they may be those of bronchopneumonia and frequently this diagnosis is made when there is no suspicion of tuberculosis.—*Pediatrics.*

Pellagra Treated with Picric Acid.

In thirty-five cases the eruption was treated by W. T. Wilson (Bulletin Harris County Medical Society, July, 1914) with picric acid gauze official, or gauze soaked in a saturated solution of picric acid. For mucous membranes a 0.5 per cent solution was used as a gargle. Internally most patients were given 25 drops of a 1 per cent solution three times a day; some ¼ to ½ grain every three hours. Only three patients were put on a diet. All

three were insane and were placed on milk and egg for from seven to ten days and regular diet after that.

Improvement is first noted in the mucous membrane of the mouth, tongue and throat about the fourth day; in about five days intestinal symptoms improve, and in about seven days the skin begins to desquamate and assume a natural appearance. A majority of these cases had the dry form, but four or five were of the moist form of erythema. The two types were amenable to treatment. There were no toxic effects from the drug in evidence in any case.—*The Journal of the Am. Med. Asso.*

The Outlook in Epilepsy.

W. A. Turner states that when a case of epilepsy first comes under observation certain features are present by which the outlook may be surmised. As features of a favorable character may be mentioned the commencement of the disease between the age of 16 and 20, especially if a hereditary history is obtained, and some obvious exciting cause for the disease is present; the commencement of the disease after 40 or 45 years of age, provided organic disease of the brain can be eliminated; the infrequent occurrence of the seizures, and the absence of any obvious mental impairment or well marked stigmata of degeneration. In contradistinction to the above mentioned types of epilepsy, there is the incurable, chronic, or confirmed type, which finds its way eventually into institutions for epileptics. Epileptic dementia is revealed by all grades of mental deficiency, from a mere defect of memory, especially for recent events, up to pronounced dementia. Although an integral part of the disease it may be modified to some extent by the duration, the frequency, and the character of the seizures. Once the mental condition has become materially affected in the direction of dementia, the outlook as regards any real amelioration is unfavorable, although the fits may be kept in abeyance over long periods by sedative remedies.—*Med. Record.*

Treatment of Ringworm of the Scalp.

P. E. Bechet states that the most valuable local remedies in this condition are iodine (with genuine goose grease as a base it is very efficient particularly in the early cases), and mercury in the form of ammoniated mercury up to 10 per cent strength, or oleate of mercury in 10 to 25 per cent ointment. Chrysarobin, in saturated solution in chloroform, painted on, and after evaporation of the chloroform, covered with several layers of collodion, is particularly useful in the chronic cases. Sulphur in 20 per cent ointment with 10 per cent naphthol, is very useful. An ointment which is frequently used at the New York Skin and Cancer Hospital with good results when the parents are sufficiently impressed with the necessity of vigorous application, consists of red oxide of mercury ointment, a dram and a half; sulphur ointment, three drams; cold cream, one ounce. Needling as recommended by Aldersmith should be reserved for the more stubborn cases, as it is rather a severe measure depending on an inflammatory reaction and the formation of a kerion for its success. In the absence of inflammation one can not be too vigorous in the application of any of the parasiticide ointments. This really constitutes the key to a successful result, a fact easily understood when one considers the location of the fungus.—*Medical Record.*

A Typhoid Carrier at a Public Dinner.

W. A. Sawyer has traced the source of infection in ninety-three cases of typhoid fever in an epidemic at Hanford, Cal., to a typhoid carrier who prepared food served at a public dinner The vehicle of infection was a large pan of Spanish spaghetti prepared by the carrier. This dish was baked after it had been infected, but this baking was shown by laboratory experiments to have incubated the bacteria instead of sterilizing the food. Certain customary methods of cooking are thus shown to be inadequate as a protection against infection. The incubation period in the majority of the cases in this epidemic of typhoid fever

proved to be shorter than the time usually regarded as the minimum. The first case developed three days after infection. More cases showed their first definite symptoms six days after the infected food was eaten than on any other one day. The ways in which a carrier may transmit infection are so varied and so numerous that attempts at the control of mere channels of infection will not offer sufficient protection. Those who were suspicious of the raw salad at the dinner in Hanford and ate the freshly baked spaghetti turned from a safe dish to one which was heavily infected. The best protection against carriers will come through thorough investigation of the source of infection in every case of typhoid fever. When carriers are discovered they can be advised and controlled. The writer warns us that until we have a sufficiently large number of properly trained epidemiologists on a full-time basis among State and local health officials the danger from carriers will not be noticeably diminished, and the individual will find in antityphoid vaccination his best protection against infection from carriers.—*Medical Record.*

A Suggestion Concerning Congestion in Rheumatism.

I desire briefly to call attention to a little procedure commonly used by surgeons with benefit in treating infections and which may be useful in the treatment of acute articular rheumatism. I refer to passive congestion produced by constriction of an extremity or otherwise. Acute articular rheumatism is a systemic infection with particular affinity for joint structures, and this procedure, which aids Nature by flooding the involved portion with Nature's own anti-bodies, is sound in principle. Venous congestion does more than this, however, when salicylates are being administered. The ingested salicylates exist in the alkaline blood and tissues only as salicylates, and these have no germicidal action. However, in the presence of greatly increased carbon dioxid tension, some salicylate is converted into salicylic acid, and this is a powerful germicide. It is supposed that in the congestion of an inflamed joint this conversion takes place. Thus if the

salicylates do have any direct effect on the organisms causing the disease, that effect is increased by retarding the venous circulation of a part involved.—*The Journal of the American Medical Association.*

OBSTETRICAL

Fibroid Tumor in Pregnant Uterus.

When about two months pregnant Reid's patient while helping to put down a carpet felt a sudden pain to the right of the pelvis; it was not very severe, but she had to rest awhile. Next day she still had pains, but she was able to take an active part in a whist drive and dance. The following day the pains were worse, and she sent for her physician. The pains increased in severity in spite of rest and palliative treatment; vomiting and inability to sleep added to her distress and her condition was fast becoming somewhat alarming.

On opening the peritoneal cavity 4 to 5 ounces of dark venous blood gushed out, and there were extensive but recent adhesions of parietal peritoneum, omentum and small gut around the tumor. On separating these Reid found a soft fibroid tumor about the size of a fetal head at full term, partially extruded from the uterine wall to the right of the fundus. The rent in the uterus was fully five inches long, the edges of the tear were ragged, and there was slight venous bleeding. The fibroid had burst through its capsule, and at least half of it lay external to the uterine wall. The body of the uterus was enlarged and suggested a pregnancy of two or three months' duration. The tumor was easily shelled out, and the bleeding stopped by deep chromic gut sutures inserted to close the rent in the uterus. The abdomen was closed without drainage. On examination after removal the fibroid gave the appearance of being in an early stage of red degeneration. The pain entirely ceased after the operation, and the patient made an excellent and rapid recovery.—*Journ. of the Am. Med. Asso.*

Dystocia Due to Enlargement of the Fetal Bladder.

Bohi describes a case in which the fetal bladder contained three liters of fluid and constituted an absolute interference with labor. The diagnosis was not made at the time but after puncture of the cystic mass, delivery was accomplished without difficulty. A very careful autopsy was made which is presented in its entirety. The bladder was found to consist of three portions of which the center had undergone a marked hypertrophy and hyperplasia of its muscular walls. The bladder was intimately connected with the musculature of the abdominal wall and by its size displaced the various abdominal and pelvic organs. The urethra was completely absent and this resulted in the extreme distention observed.—*The Post-Graduate.*

Ectopic Gestation.

Dr. C. D. Palmer reports a case of ectopic gestation, which seems unusual, because of having occurred twice in the same individual. About ten days ago, I was called during the night to the bedside of a patient whom I had frequently attended. I found her pale, pulse almost imperceptible, and breathing but slightly. She had the appearance of a person suffering from a serious hemorrhage. After some inquiry, I determined that this was a case of ectopic gestation. She was removed to Christ's Hospital, and the ectopic sac extirpated.

It so happened that ,about ten years since, I was called to her in consultation by a German physician, who was attending this same woman. Her condition at that time was much worse than I found a few days ago; she was paler, absolutely pulseless at wrist and over carotid artery at temple. After taking the history, we decided that it was an ectopic gestation; had her hurriedly taken to the Bethesda Hospital, in an ambulance, where I opened the abdomen, finding on the left side of uterus a mass having the appearance of a ruptured ectopic gestation sac, at the third month. This I removed, flushing the abdominal cavity with hot salt water.

After the operation was completed, we placed her in a dorsal position with the lower part of her body much elevated. We gave her a little nourishment, both by rectum and by mouth. After some forty-eight hours had passed, her pulse could be slightly detected, she began to rally, the pulse and respiration became stronger, she gradually improved day by day, until at the end of some four weeks, she was able to go about her home the same as usual.

The unusual feature of this case is that in my recent call to the bedside of this woman, I found the same condition, except that the symptoms were not nearly so pronounced. I sent for my son, Dr. Dudley Palmer, and we operated, removing the mass this time from the right side. The woman is progressing nicely and promises to make a good recovery.—*The Lancet-Clinic.*

The Influence of Douches on the Bacterial Content of the Vagina in Pregnancy.

The author presents the results of an extended series of observations made at the end of pregnancy in which the effect of douching was controlled by careful bacteriological examinations. A total of forty-four cases was studied and solutions of oxycyanide, bichloride of mercury, lysoform and potassium permanganate were found to diminish only temporarily the number of colonies and this was likewise observed after the application of tampons saturated with solutions of iodine and alcohol. The results were very unsatisfactory with the use of distilled water as well as of boracid acid and aluminum acetate as well as the dry treatment with powder. It would appear, therefore, that these douches are entirely unnecessary in the presence of normal vaginal secretions. In the presence of bacteriological conditions, however, the quantity of infections material is undoubtedly diminished and further experiments with the use of lactic acid douches are still in progress and those are apparently of considerable value.—*Post-Graduate.*

Pituitrin in Labor.

Writing to the *British Medical Journal* of May 2, 1914, Hughes states that the interesting account in the issue of the *British Medical Journal* of April 25, 1914, by Dr. P. A. Hendley, of his use of pituitrin, needs both qualifying and supplementing. The statements that follow are based on a personal use of this agent in close upon 50 cases of normal labor during the past 18 months. Without doubt, pituitrin is a most valuable help to both patient and doctor in such cases. Labor is considerably shortened, the use of forceps is usually obviated, chloroform can be given without failure of uterine contractions, and stillbirths need not be anticipated. In his cases only one stillbirth has occured. In this case (a primpara) the child lived up to the time the head was born; the placenta was large and thickly studded with yellow nodules. The father was under treatment for syphilis. Hughes could attribute the death to some cause connected with syphilis, not to pituitrin. In the majority of cases the children have behaved quite normally on delivery, but in some cases he has observed a curious rigidity of muscles, including those of respiration, which passed off quickly and without struggle.

Dr. Hughes states that Dr. Hendley entirely omits to mention the state of the cervix after delivery in his cases, and his practice of giving a considerable dose of pituitrin (0.75 to cc.) while the os is small is not justified in the present state of our knowledge. Thus, a multipara with her sixth child had uterine inertia. Owing to the entire absence of expulsive effort for some hours, the head, though normally presenting, had retreated to a little below the pelvic brim. The cervix was intact and patulous, and believing that two or three forcible pains might finish the first stage, Hughes gave her 1 cc. of pituitrin. Labor was completed within one minute and a half. His pleasure at this astonishingly quick result was decidedly dampened on finding a pretty extensive laceration of the cervix on one side.

The effect, indeed, of pituitrin on the duration of a normal labor can only be guessed, not accurately calculated. His prac-

tice is now in primipara to wait till the end or very nearly the end of the first stage, and with a multipara to test the cervix during a pain to make sure it is not rigid but yielding easily, before giving pituitrin. If these precautions are not observed there is an obvious risk of leaving the woman with a lacerated cervix. Again, in obstructed labor—for example, in moderately contracted pelvis—the principle of forcing the head onward by any such means is radically unsound. This is amply proved by recent statistics of the Rotunda Hospital, Dublin, concerning the effect of the use and non-use of forceps in contracted pelvis.

In less than one minute after a full dose of pituitrin the uterus goes into continuous contraction. After about ten minutes remissions between the contractions become increasingly evident, and in from thirty-five to forty-five minutes the effect of the first dose has passed off. Now if delivery occurs just after the effect of a dose has passed off there is a risk of postpartum hemorrhage. The uterine muscle is temporarily exhausted, and the organ gets "lost" under the hand with unpleasant frequency. For the same reason it may be troublesome to deliver the placenta. This particular contingency should therefore be avoided by giving a second dose in time, and not less than 0.5 cc.

In conclusion, Hughes agrees that pituitrin infundibulum has a great future before it in obstetrics, and especially in uterine inertia.—*The Therapeutic Gazette.*

Editorial

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ASEPSIS.

To write of asepsis in the year 1914 except in a textbook seems strangely out of place, and yet one only has to attend either public or private clinics to find out that asepsis, real asepsis, is more talked about than practised. An observing visitor to clinics will be struck by the mighty array of caps, gowns, rubber gloves and face masks and at the same time wonder at the numerous slips in an aseptic technic. Many physicians, even in this day and time, think a momentary dip in a solution of bichloride will destroy all pathogenic germs when, as a matter of fact, the hands should be held in such solution for a long time, and even then can not be considered clean without a previous thorough scrubbing, and soaking in alcohol.

Again, we find surgeons who only make the veriest pretense of cleaning up when pus is already present. Of course they have not kept abreast of the times and the teachings of bacteriology which show conclusively that mixed infections are often much more severe than a pure strain infection. That rubber gloves are not an essential to success in surgery we all know, for some of our greatest surgeons seldom use them. That they are useful, indeed indispensable, for those handling pus and clean cases on the same day can not be gainsaid. As for the use of mouth pieces, face masks, etc., we must say that in our opinion a clean shaven,

clean face, is better than any mask yet devised, and we say this, knowing full well that most of our greatest surgeons use them as a matter of routine. With a cover over his mouth a man can not speak without causing friction between the skin and the mask, which necessarily loosens epithelium and germs, while the force of gravity hurries both into the open wounds below. Should the mask cover all except the eyes, then every wink and blink loosens germs and dirty epithelium. If masks are going to be used, then the face should be greased with some mild antiseptic ointment. Finally, we all realize that our most perfect asepsis is really imperfect, we can but do our best and trust Nature for the rest, and she will do her part—the largest part—provided we get the patient in a good condition before any surgical work is undertaken. Therefore, if you want good results in your surgical work do not rush the patient from the train to the operating room except in the most urgent cases and do not scrub your hands for ten minutes and then adjust your glasses.—W. T. B.

No Need to Fear Meat.

No Cattle with Foot-and-Mouth Disease Being Slaughtered in Federally Inspected Establishments. Thorough Cooking will Render Uninspected Meat from Local Slaughter Houses Thoroughly Safe.

Washington, D. C.——. According to the specialists of the Department of Agriculture people even in states quarantined for the foot-and-mouth disease need have no fear of eating meat, provided they cook it thoroughly. The foot-and-mouth disease is not easily communicated to human beings through food, although milk from a diseased cow might transmit the disease to a human being. In the case of milk, however, pasteurization will render it entirely safe. Human beings who do get the disease commonly get it from direct contact with a sick animal. It is wisest, therefore, for people to keep away from all animals hav-

ing the disease, unless they are properly provided with rubber gloves, coats and boots, and these are thoroughly disinfected after each visit to the animals.

In the case of meat, as in the case of milk, it must be remembered that all herds which actually show the disease are quarantined, and neither milk not meat from the sick animals can be sold. Sixty per cent of the meat used in this country is produced in the nearly 900 federally inspected slaughtering and packing establishments located in 240 cities. In these establishments no animal is slaughtered until it has passed an ante-mortem inspection and also a most rigid post-mortem inspection by a veterinarian at time of slaughter. After slaughter its meat can not leave the establishment until it has been carefully examined and stamped "U. S. Inspected and Passed." In all these establishments no animal showing any symptoms whatever of foot-and-mouth disease is allowed to go to slaughter, and no meat which, on post-mortem inspection, shows any suspicious symptoms of this complaint, can be shipped out of the establishment. All meat suspected of coming from an animal suffering with this complaint is sent, under government seal, to the tanks to be rendered into fertilizer. The Federal inspection stamp on meat, therefore, means that it is entirely safe.

The Federal Government, however, has no jurisdiction over local slaughter houses which do not ship meat outside of the State in which it is slaughtered. If, however, meat from such animal did escape from one of these local slaughter houses, which are purely under State or municipal control, all danger of its communicating the disease to human being would be removed when it is thoroughly cooked and sterilized. Those who are located near an infected region and wish to be absolutely certain of the safety of their meat should cook it thoroughly.

The disease, when contracted by adults, is not at all a serious illness. It commonly takes the form of slight fever, sores in the mouth and a slight eruption on the fingers. In the case of small or sickly children, it may take a more serious form, especially if complicated by other illnesses.

United States Chamber of Commerce to Study Food and Drugs Question.

The Chamber of Commerce of the United States of America, a body composed of representatives from about 600 local boards of trade, chambers of commerce, and trade associations, widely distributed throughout the United States, has taken up the study of the subject of uniform food and drug regulation. For this purpose a special committee was appointed in July, and its first meeting was held at the headquarters of the Chamber in Washington, October 8. The committee is composed of Willougby M. McCormack, of Baltimore, A. J. Porter, of Niagara Falls, John A. Green, of Cleveland, B. L. Murray, of New York and Theodore F. Whitmarsh, of New York. Mr. McCormack, the Chairman, is a member of the Board of Directors of the Chamber of Commerce of the United States and the head of the firm of McCormack & Co., manufacturers of extracts and drugs and importers of spices and teas; Mr. Porter is President of the Shredded Wheat Co.; Mr. Green is Secretary of the National Association of Retail Grocers; Mr. Murray is chemist to Merck & Co., and Mr. Whitmarsh is Vice President of Francics H. Leggitt & Co.

The first meeting of the committee was devoted to organization and the preparation of a program for the committee's future work. The following resolution was adopted:

Resolved, That the Chairman be, and he hereby is, authorized and empowered to appoint two sub-committees to consider, respectively, the problems relating more particularly to food control and to drug control, and to report their findings to the general committee.

As a result of the above resolution, Mr. McCormick appointed Mr. Murray as Chairman of the sub-committee on drug control and Mr. Porter as Chairman of the cub-committee on food control.

The following resolution commending the efforts of the Department of Agriculture tending towards coöperation and uniformity was also adopted:

Resolved, That this committee hereby earnestly and heartily endorses the establishment of the bureau in the United States Department of Agriculture, particularly concerned with Federal and State coöperation in the enforcement of the Food and Drug Control Laws, thereby promoting an equal and uniform enforcement of such laws, believing that this work is distinctly in the public interest.

The position taken by the committee on the meaning of uniformity is interesting and will repay close examination. Its views are not confined to a limited horizon, but are intended to grasp the broader and wider fields. Its efforts will be confined to no organization or class of people. It hopes to cover in its endeavors the position of the wholesaler, the retailer, the consumer, the manufacturer, the official, and all others concerned in the production, handling and consumption of food and drugs. But only the broad, general questions of national character will be considered. After a lengthy discussion the committee at its meeting, by unanimous vote of all present, adopted the following regarding uniformity:

> Uniformity, as the committee would define it, involves the highest degree of efficiency in food and drug control which it is possible to have prevail universally and equally in every part of the nation. The Federal, State and Municipal laws and their regulations would, if perfect uniformity were attainable, reach the level of full and complete efficiency—and thereby afford equal protection and a uniform standard of living for all the people. Uniformity accomplished, places merit and the general public interest over local political or geographical divisions. This committee will, therefore, direct its efforts and consideration toward the occomplishment of uniformity. The committee can not but feel impressed with the magnitude, the importance, and the seriousness of its work. It can not but feel the need for the closest study of the subject. And again, the committee can not but feel the necessity for the fullest and most cordial coöperation between itself and the officials and all others

concerned. The committee will, of necessity, act deliberately and slowly, making certain of each step, considering only the important problems of national character.

Vermont's Poison Lesson.

Fourteen Deaths Were Caused by Wood Alcohol—Secretary of the Committee for Prevention of Blindness Points Out the Danger in the Improper Labeling of Poisonous Spirits.

The recent tragedy in Vermont, in which fourteen persons were killed and a number of others blinded by drinking whiskey adulterated with wood alcohol, brings forcibly to mind the fact that legal provisions throughout the country are inadequate to prevent wood alcohol poisoning. The Vermont incident is an example of what happens every little while in other states.

A very recent instance is that of a number of Armenian rug weavers in New York City who were poisoned by drinking anisette consisting largely of wood alcohol. Three of the men died, and two were blinded. As the groceryman who sold the anisette and the man who manufactured it have no property, it is not possible to secure damages for those who were blinded, nor for the widows of the men who died. These cases may be prosecuted by the District Attorney and small fines imposed, the payment of which would simply enrich the State, but in all probability have little or no effect upon the problem as a whole.

The difficulty goes further back than even the small manufacturer, that is, to the producers of wood alcohol who rectify this poison so highly that it can not be distinguished from grain alcohol, known to the trade as Cologne spirits. This rectified wood alcohol, possessing all of its original poisonous qualities and closely resembling grain alcohol, is put on the market under various misleading names, among them being Colonial spirits. As

Cologne spirits and Colonial spirits look, smell, and taste alike, we can not wonder that the poisonous alcohol is sometimes used instead of the non-poisonous spirit.

VERMONT DRUGGIST MISLEAD, HE SAYS.

The Vermont druggist claims that he ordered, and thought he was using, Cologne spirits, but that he was actually sold the poisonous Colonial spirits.

During the last session of the New York State Legislature, the Committee for the Prevention of Blindness, endeavored to have passed a law designed to prevent wood alcohol poisoning. At the public hearing on this bill, the danger of confusing Cologne and Colonial spirits was emphasized by the President of the State Pharmaceutical Association. He described a case in which a druggist ordered Cologne spirits, or grain alcohol, to use in preparing his tinctures, extracts, etc. In response to his order he received a five-gallon can labelled "Col. spirits." For some reason this druggist analyzed the contents of the can, and found it to be wood alcohol, the "Col. spirits" evidently being used as an abbreviation for both Colonial and Cologne spirits. Since as little as a teaspoonful of wood alcohol has caused blindness, this man's precaution evidently averted just such a tragedy as has occurred in Vermont.

In spite of the abundance of such evidence as this concerning the dangers of allowing wood alcohol to be sold under present conditions, those interested in the manufacture of this product were successful in their efforts to have the committee's bill defeated.

The New York City Department of Health has recently amended its sanitary code to require all forms of wood alcohol to be labelled "wood naphtha" and to bear a poison label, together with the skull and crossbones. This is the most definite step that has thus far been taken in this country toward preventing wood alcohol poisoning from imbibition. This requirement, however, will be effective only in New York City, and will have no bearing upon poisoning following the inhalation of wood alcohol fumes in the industries.

Throughout the State of New York the combined provisions of the State Liquor, Pharmacy, and Agricultural Laws are at present inadequate to prevent death and blindness from swallowing and inhaling wood alcohol.

When by State law or through rulings made by the State departments, all forms of wood alcohol are labelled poison, as is required by the New York City Department of Health, and wood alcohol in the industries is replaced by industrial (denatured) alcohol, we shall cease to hear of these pathetic and wholesale disasters.

CAROLYN C. VAN BLARCOM,
Executive Secretary.

Reviews and Book Notices

"The Formulary for the Treatment of Disease in Children"—By Ludwig Freyberger, Jr., M.D., Vienna, M. R. C. P., Lond.; M. R. C. S., Eng. Barrister at Law, Lexicologist and Pathologist, Etc. Fourth, Revised and Enlarged Edition. Adapted to the British Pharmacopoeia, with an Appendix on Poisons, their Symptoms and Treatment. New York. Rebman Co., Herald Square Bldg., 141-145, W. 36th St.

This is a most useful handbook for the busy practitioner as an aid to practice, for it enables him at a glance to select a suitable formula for the treatment of any disease to which children are liable. The book is of pocket size and so arranged that reference can be quickly made and the text is printed in such a form that a glance is all that is necessary to interpret the origin and character of the formula. The drugs are arranged in alphabetical order. There is given in the text a brief account of the properties of the drugs, use, therapeutics, incompatibles, correction of taste, examples of formulæ, their antagonists and incompatibles. A special feature is the care devoted to means of rendering the tastes of unpleasant drugs more palatable. It is an ideal pocket formulary that will prove of the greatest help to every practitioner.

"The Clinics of John B. Murphy, M.D.", at Mercy Hospital, Chicago. Vol. III, No. 3. Octavo of 215 pages, 54 illustrations. Philadelphia and London. W. B. Saunders Co., 1914. Published Bi-Monthly. Price per year: paper, $8; cloth, $12. W. S. Saunders Co., Philadelphia, London.

This number of the Clinics, like most of its predecessors, contains many very interesting and instructive chapters. Especially interesting to us were the articles on Ileus, Arthroplasty, Colles Fracture and Paget's Cancer. While each new number reiterates in some chapters, matters brought out in previous numbers, we do not find this a great drawback, nor do we think the profession as a whole finds it so, because it is in that way alone that these clinical lectures are going to do the most good. We take pleasure in commending this number of the clinics, and advise our subscribers to subscribe to this work.

Publisher's Department

"Pepsin" is undoubtedly one of the most valuable digestive agents of our Materia Medica, provided a good article is used. "Robinson's Lime Juice and Pepsin" (see adv. in this issue) we can recommend as possessing merit of high order.

The fact that the manufacturers of this palatable preparation use the purest and best Pepsin, and that every lot made by them is carefully tested before offering for sale, is a guarantee to the physician that he will certainly obtain the good results he expects from Pepsin.

ULCER OF THE TIBIA.

A shoemaker, age 51, weighing about 205 pounds, had a painful ulcer of the tibia, that a short time before had been treated in Baltimore Hospital. Skin grafting was resorted to and he was discharged with the ulcer apparently healed. On resuming his work it broke down again as bad as ever. I started him using Glyco-Thymoline topically, but found that, applied pure, pain resulted, and I diluted with sterilized water to a 25 per cent solution. Compressed soaked in this and freely applied with proper precautions for cleanliness brought about a thorough filling in of healthy granulation and skin. This was the more remarkable in that the patient kept on his feet at work during the treatment. He is feeling now in good condition. I believe no other preparation than your Glyco-Thymoline could have healed this man, and he is very happy now."

Philadelphia, Pa. HENRY FRANK, M.D.

Stubborn Cases of Rheumatism—"Many stubborn cases of rheumatism respond rapidly to the influence of Tongaline. This product, representing the highest degree of pharmaceutical skill, contains the salicylates in an unusually potent form, because they are not obtained by synthesis but from the natural oil. In addition to their potency as anti-rheumatics, they possess the advantage of not deranging the stomach." Physicians who appreciate honest pharmacy will find in Tongaline a product worthy of their highest commendation and confidence.

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Original Communications

SHOULD INEBRIATES HAVE HOSPITAL TREATMENT?

BY T. D. CROTHERS, M. D.,

Supt. Walnut Lodge Hospital, Hartford, Conn.

My opinion is very often called for concerning the advisability of hospital treatment for moderate or excessive users of spirits. These questions are becoming more and more intense every year, for the reason that the disability of such persons is recognized more clearly than ever. Can they be helped by medical treatment is a very common inquiry.

The average physician will agree that active remedies during the drink paroxysm may be very helpful, but when the paroxysm is over, he will express much doubt as to the value of further treatment.

The quacks, with their assumed specifics, have brought the medical care of inebriates into great prominence for the last twenty years. They started out with the assumption that a certain combination of drugs would restore to sobriety and practically cure a large percentage of these persons.

The secrecy and pretentions concealed the drugs for a long time, but they were found to be well known remedies, the virtue of which had been tried for a long time, and were well known.

A great number of empirics offered a large number of drug combinations, claiming that they were specifics. Careful observation and experience failed to confirm these claims. Notwithstanding this, this quack stage with its pretenders has done much to educate the public to look for relief from medical means and measures, and while many persons have been permanently restored, it is doubtful if not a very much larger number have been made incurable, and hurried on to an early death by their methods. This illustrates the history of every great advance in medicine, which is marked by a quack stage, in which certain facts are exaggerated and materialize in extravagant ways, and are found to be untrue from farther study and experience.

Whatever theories we may entertain for ourselves, there are certain facts which have been attested by laboratory and clinical experience, that are beyond all question. Thus, alcohol is an anesthetic and not a tonic or stimulant. Its so-called pleasant effects are simply narcotic, covering up the pains, and fatigue and the feeling of exhaustion. Its continued use is erosive and corrosive to cell and tissue. To what extent, and in what way, are not yet clearly known. Clinically, diseases and degenerations are most often traced to the use of alcohol and a great number of authorities assert most positively that next to syphilis, alcohol is the most active and predisposing cause of disease and degeneration.

Studies into the causation of diseases bring very striking confirmation to this fact, and indicates further that a great many of the organic and nervous degenerations are due to this one cause.

When the patient is demented, or has reached stages in which alcohol is called for, without power of restraint, there can be no question of the need of active treatment, whether this treatment shall be in the form of a prescription and frequents visits at home under the advice of his family physician, or whether he shall be taken out of his surroundings and placed in an institution, where specific care of this kind is given, are questions which must be decided in each individual case.

There are practically two classes of drinking men in this country, the so-called moderate drinker, who is seldom or never seen intoxicated, but who, after a few years suffers from so-called

rheumatism, nervous exhaustion, nutrient disturbances and a great variety of local troubles, which do not yield to the ordinary remedies, there is profound neurasthenia, anemia, and toxemias, which are more or less present in every case. The patient himself very rarely acknowledges the presence of alcohol as an exciting cause, or even as a contributing cause, and in many cases he uses alcohol as a remedy, and as a result becomes more and more debilitated. These are the persons who go off in search of health, principally to watering places, to springs in the mountains, to Europe and elsewhere. After a time they return very little benefited. By and by acute alcoholic symptoms develop, and then attention is turned to this symptom, and some special treatment is given.

The family physician is somewhat baffled, because he has no literature to direct him, and perhaps he is constitutionally averse to the thought that spirits are directly responsible for his trouble, hence he seeks other causes.

Finally, the patient is persuaded to go into some special sanatorium for treatment of some conditions that seem to be prominent. Here the more experienced physician finds that alcohol is the active cause and directs his attention to removing this. The patient recovers in some measure. If the physician impresses upon him the real danger, and he realizes it, the most satisfactory results follow.

It is a fact not well known that the moderate or steady user of spirits is far more chronic and intractable in the degenerations from which he suffers than one who has never used spirits. Such persons should go under hospital treatment, if only for a short time, so as to break up the conditions into which they are certainly passing. If the patient is not convinced that alcohol is an exciting cause, he certainly can be impressed by hospital treatment of the need of better living, and greater care of his body, and correct the defects of many conditions that exist. He can, in a hospital, have the advantage of a practical demonstration of the marked improvement which follows the withdrawal of spirits and will certainly have an opportunity to reason for himself, and follow the direction of others.

The thought can be impressed on his mind that the search for health must begin with a total change in his present habits and methods of living. The family physician should urge all such persons to take a sanatorium or hospital treatment, then return and be under the care of the physician who will add most valuable after care and treatment by advice and therapeutic measures according to the conditions present.

The second class of users of alcohol are the periodics, or the spasmodic drinkers, who drink to excess at times, then become total abstainers. The abstinent period varies and the term of the drink paroxysm also varies and is subject to great irregularities. During the paroxysm the family physician can render most efficient aid, and then when the paroxysm is over he frequently lapses into a moral teacher and ends in advice, threats and counsel.

This is practically useless, although occasionally it may help to lengthen the period. These drink attacks resemble epilepsy, or other convulsive neuroses, and gather and break with a uniform intensity and duration. The patient very often is emphatic in his own condemnation and determined that it will never happen again, but this does not avail. Persons of this character sometimes occupy the very highest walks of society, and are concerned with very large interests in both professional and commercial circles. The question, what can be done with them, is an ever absorbing one, and most intensely vital in a great many ways. In the remorseful stage, these patients go to a sanatorium or at the termination of the drink attack. Their recovery is assured, no matter what the treatment may be. If they fall into the hands of the quacks, they become his promoters and advocates, but sooner or later the same storm breaks again, and when it is partially over, they go under the care of a stranger, recover, and go out as before.

Some of these patients go the rounds and visit nearly all the well known institutions of the country, recover at each one, then finally die of some intercurrent disease. At no place have they been treated properly, or impressed with the gravity of their condition or the need of institutional treatment. They have gone away from each place under the delusion that they are cured, only

to find it a fallacy. The periodic inebriate ought to have institutional treatment before the paroxysm. His family physician and friends should arrest and place him in an institution at the very beginning of the paroxysm, or if he is a close observer, and feels the attack coming on,, he will go at once to some place of refuge where he can be controlled and given appropriate treatment. The paroxysm is cut short and the patient is reëducated and restored, and sent out better prepared to meet another storm that in the course of events is sure to follow.

There is in the eastern cities an increasing number of persons occupying the highest positions, suffering from these neuroses, who go at once on the first intimation, or who submit to be taken by their friends the moment they begin to drink, to a proper hospital and treated by baths, electricity and other measures, which control and limit the attack.

Without such care these persons would be practically incurable in a very short time and carry down their families and business and reputation and bring great suffering to their associates. In my experience of over forty years, in the care and treatment of the alcoholics and drug takers, I have urged the hospital treatment of all such cases at the earliest possible moment. A few weeks, then, is worth months afterwards and is far more effectual in bringing about permanent results. There is an increasing number of persons who come to institutions for a few days' or weeks' treatment, with the single purpose of averting a drink storm, which they know is before them. The ability to correct the paroxysm, or limit it, increases with the years. Some patients of mine have come three or four times a year, then less and less, and now are permanently restored. The appearance of the drink storm can be controlled by home measures, and by visits of the family physician. A larger number of persons with this experience are treated by the family physician at home, who by a simple cathartic, a bath, or some mild hypnotic, is able to break up the nerve storm, and save them the narcotism of drink.

Hospital treatment for inebriates is a good deal more than administering certain drugs, or confining the patient for a brief time. It is surroundings and conditions for re-education for the discov-

ery of the actual causes, and the application of means for restoration and cure.

It is the experience of all persons who are treating these cases along scientific lines, that a residence in a hospital affords an opportunity to discover the real causes of the drink craze, and to teach the patient how to avoid them in the future. The surroundings of the hospital and the scrutiny by exact students who have only one purpose to discover why he should suffer in this way, is a revelation, both to the patient and his friends; and the instruction that they are able to give both to the friends and family physician, enables hem to save the lives of many persons who would otherwise be lost. It is not the drugs, or the beautiful surroundings, but it is the man and the scientific work and study of his case, which is called for, and then the application of correct, common-sense means and measures that will produce restoration.

There is no fiction in the treatment of drinking people, or sentiment, nor appeals to the patient's judgment of himself, or opinions of what he needs. It is the application of exact scientific and hygienic teaching that is called for.

There are some institutions in this country that are doing grand work in this direction. There are many family physicians with advanced knowledge on these topics, who urge most emphatically that all their patients who suffer from drink and drug neuroses, take hospital treatment and avail themselves of the very best flnowledge that it is possible to attain in these scientific times.

Hospital treatment can only do so much, but it can make it possible for the family physician to complete with success measures of treatment that are very satisfactory.

All authorities agree that the number of drink and drug neurotics (if not increasing), is very large, and their presence are very serious menaces to business and home interests. They agree in the possibility of successful treatment, and such views are becoming prominent in all medical circles.

Selected Articles

THE TREATMENTS OF CROUPOUS OR LOBAR PNEUMONIA, IN PARTICULAR THAT INCLUDING MILK DIET.

There are six or more treatments for croupous or lobar pneumonia—some old, some current, one a treatment of the future, and one new. The course of this murderous disease is so rapid that the outcome or end is manifest in a week. It is therefore the duty of the conscientious practitioner to visit the patient at least twice a day, to be active in his medication, and to have a trusty nurse or attendant constantly at the bedside. There is reason to believe that patients in pneumonia have sometimes starved to death.

The several treatments above referred to may be described as follows:

1. The future treatment, yet undiscovered, is that of an *anti-pneumonic serum* (antitoxin) or *vaccine*. With such an agent a lung inflammation will either be prevented or cut short in a day, and the patient recover from illness as quickly as after the antitoxin of diphtheria.

2. The *expectant* treatment, without medicaments, based upon the knowledge or assumption that pneumonia is a brief disease, harmless to those of robust vitality and those neither too young nor too old to throw off the malady unaided. This method is mentioned by all writers on treatment. Here and there it is not favored or stated with approbation. Osler speaks of the appalling mortality of pneumonia, and Tyson calls it treacherous and uncertain at any age.

3. The old treatment of *blood letting,* with its accessories or substitutes of the *depressant* class. This is the antiphlogistic treatment of inflammation and fever. Wood's practice gives a clear and precise description of the method, once thought indis-

pensable. He states that in the young and healthy recovery ensues under proper or unproper remedies or without any. Apparently salutary and essential measures are injurious and even fatal under some circumstances. In common pneumonia in vigorous subjects, the most efficient remedy is bleeding; 16 to 30 ounces. This is to be repeated when indicated. Purgatives are then necessary —and likewise tartar emetic in small doses. Opium, ipecacuanha, and calomel, several times daily doses in pill form, are beneficial. Cups and leeches to the chest may follow or replace the venesections. A large emollient cataplasm may be needed, but renders the patient liable to take cold. Finally, if the disease proves obstinate, it is proper to resort to the mercurial impression till the gums are somewhat affected. Whilst the mercury is given, a blister 6x8 or 8x10 inches in size is to be applied to the chest. Expectorants are useful in the declining stage. For failing strength, ammonium carbonate and oil of turpentine in rather large doses are useful. In drunkards the accustomed amount of alcoholic stimulants is diminished. The best plan is to allow the stimulus and at the same time to bleed. There is little hope of cutting short the disease by depletion (bleeding) after four or five days. In the old and feeble, and in children, bleeding is not useful; for children, leeching; for the old and feeble, cupping and leaching, are indicated.

The treatment of Rasori by tartar emetic was practiced either with or without bleeding. A safe plan of employing this otherwise dangerous method was to give only ¼ grain to 2 grains (0.0015 to 0.12 Gm.) of the drug every two to four hours. It required frequent visits to detect the proper moment at which to suspend the treatment, as serious and sudden exhaustion from vomiting and purging was liable to occur. Wood declared the tartar emetic treatment to be less manageable than the lancet, and less safe than the mercurial plan.

Among other remedies noted were veratrum viride, used in the United States with much success in miasmatic regions—also lead acetate, hydrocyanic acid, digitalis, ammonium chloride; alkalies and emetics in the early stage, potassium iodide in the late. Chlor-

oform inhalations, 60 drops every two or four hours, but not enough to produce unconsciousness, were advised.

The dietary at first consisted of mucilaginous and farinaceous decoctions and of dried fruits, together with orange and grape juices. More advanced cases were given tea, toasted break, crackers, rice, Indian mush and after these, milk. In convalescence and earlier in cases with debility, broths, lighter meats, eggs, oysters, etc., were allowed.

Bleeding and its powerful adjuncts were given up, however, at about the end of Wood's time, after the good results and lessened mortality when such treatment was not practiced had been noticed. J. Hughes Bennett did much in achieving this reform in English and American practice. In his work "The Restorative Treatment of Pneumonia," 3rd edition, 1866, he condemned blood letting and the antiphlogistic treatment then in vogue. The conviction that removal of exudate was dependent upon vital processes of growth led him to an opposite method of treatment, viz.: never attempt to cut the disease short or to weaken the pulse and vital powers, but on the contrary to further the necessary changees which the exudate must undergo in order to be fully excreted from the economy. To this end, during the period of febrile excitement he contented himself with giving salines in small doses with a view to diminishing the viscosity of the blood. At the commencement of the treatment he ordered as much beef tea, milk, and some other nutrients as could be taken, and, as soon as the pulse became soft, solid food and from 4 to 8 ounces of wine daily. As the period of crisis approached he gave a diuretic containing 30 minims (2 c.c.) spirit of nitrous ether and sometimes 10 minims (0.6 c.c.) of colchicum wine three times daily, to favor excretion of urates. If crisis occurred by sweat or stool he took care not to check it in any way. He did not consider that the salines and diuretics did more than to assist the natural progress of the disease. The essential part of the treatment consisted in the rest, nourishment and support given to the body throughout.

In our time there remains of the heroic antiphlogistic system venesection, done once in a practitioner's life, opium and morphine.

4. A more modern treatment is that of *hydrotherapy*, consisting of the use of the cold or tepid bath, a cold wet compress and pack, and the ice bag. Any physician who has worked against pneumonia with this method will have been impressed by its efficiency in ameliorating the acutest and most urgent symptoms and often in bringing about a quick cure in the presence of a condition of alarming gravity. Its most brilliant effects are seen in infants and children.

An offshoot of hydrotherapy is the *open air* exposure of the pneumonic patient at a temperature lower than that found in the bed-chamber, as in tuberculosis. One assumes that the open air is of greater purity than that of a habitation. Another beneficial influence is exerted from the fact that cold air, like cold water, abstracts heat from the body and reduces febrile temperature.

The effects of cold air—aërotherapy—are very satisfactory, but neither this treatment nor hydrotherapy can become permanently established as the best. As in the case with the cold bath treatment of typhoid fever, hydrotherapy and aërotherapy in pneumonia are not suitable for private practice, and should not be applied where the practitioner has at his command another treatment of equal or superior merit. The susceptibilities of human beings in connubial and family relationships can not be violated by the infliction of pain, real or fancied. Hence, hydrotherapy, like aërotherapy, is not suitable as a routine procedure, and is in favor chiefly in hospitals. Of the open air treatment, G. W. Norris states that the results are excellent, but that it is necessary to educate an unwilling public if the treatment is to be actually carried out.

5. The *specific* treatment with drugs includes the administration of quinine in large doses, of digitalis in like quantity, and of potassium iodide. The iodide treatment is indispensable in every pneumonic case with secondary, tertiary, or hereditary syphilis. Creosote, and bichloride of mercury and sulphur are other agents of this class. With quinine and digitalis the writer has had no experience; the other remedies he considers of value.

6. The *symptomatic* treatment is that which is chiefly in use. Of the drugs which mainly constitute it, almost all have had both

advocates and opponents. The former have favored their use as necessary and helpful, the latter combatted it as unnecessary, harmful or dangerous to life.

For pleuritic pain, an ice-bag, a warm conpress, a flaxseed meal poultice, mustard to the side, dry cups, leeches, wet cups in the strong, and a hypodermic injection of morphine are recommended. Other measures advocated are: quinine, digitalis, senega, apomorphine, and the free use of fluids.

For heart weakness, an ice-bag, digitalis, strophanthus, caffeine; injection of camphor in oil and ether, and likewise of strychnine; nitrates, and nitroglycerine are frequently ordered. In drunkards, alcohol is given; in delirium tremens, tepid baths, cold water to the head, strychnine hypodermically, morphine likewise, paraldehyde and chloral hydrate in small dosage.

In the presence of cough, codeine, or morphine in small doses, as well as alkalies, are used. Dyspnea from weak heart is relieved by bleeding, strychnine, digitalis, and inhalation of ethyl iodide or oxygen. The latter may be inhaled also for venous congestion and sleeplessness. By some, to be sure, oxygen is held to be worthless, and by still others, harmful. For sleeplessness with cough, Dover's powder is considered appropriate.

Laxatives are useful, and likewise diuretics. The best diuretic, according to Norris, is water, 4 to 8 ounces (120 to 240 c.c.) of which are to be given hourly. Toxemia is combated by hydro- and aëro- therapy, substantial feeding and moderate stimulation, enteroclysis, venesection, and intravenous injection of saline solution.

According to this writer, alcohol is contraindicated in pneumonia because it lessens the opsonic power of the blood, diminishes glycogen in the liver, lowers blood-pressure, causes venous congestion, and decreases the work of the heart; it acts as a transient stimulant, then as a depressant. In drunkards, immediate withdrawal is advised. Death where the heart is healthy is due to vasomotor paralysis and great dilatation of the splanchnic vessels. There is a fall of blood-pressure, cold sweating, tympanites, delirium and arhythmia. Here, says Norris, the proper treatment is fresh air, cold sponging, mustard foot bath, saline transfusion,

and epinephrim intravenously; strychnine, atropine, and caffeine are also considered useful. Digitalis is indicated only in cardiac dilatation, and the nitrites are contraindicated. Where there is heart weakness there result cyanosis, venous distention, rapid pulse, enlargement of the heart to right, a weak pulmonic sound, and a muffling of the first heart sound. The liver and kidneys becoming congested and the lungs edematous, then, still quoting Norris, we should bleed—8 to 24 ounces; digitalis and strophanthus must be used by vein and through the skin,, but not too late. The calcium salts, according to Brunton, act directly as a stimulant to the heart. They also neutralize the toxins of albumose and peptone nature and counterbalance the sodium chloride retention in the economy found in this disease. The application of a flaxseed meal poultice to the chest in pneumonia is a domestic treatment that has never been in favor in textbooks. Sir William Osler alone says that in the pain of pleuropneumonia in children, hot poultices are preferable to other methods of treatment.

7. The treatment with a pure *milk diet.* In examining a number of medical works of various dates it was noted that the dietetic treatment of croupous pneumonia has been neither cultivated nor systematized. Every second or third writer declares milk to be the best food, but does not describe its proper use, and invariably there are added other articles of diet that are objectionable or harmful.

The best and only diet in pneumonia, in my estimation, is milk given in a regulated manner. The results of using is have been so good that I consider the milk treatment of croupous pneumonia as useful and as necessary as it is in typhoid fever. With a pure milk diet properly given in this affection the diseased organism is aided in the following ways: The cough tends to become moist, the respirations deeper and less frequent. The heart contractions are strengthened, the pulse becoming fuller and slower. The febrile temperature is reduced 1 or 2 degrees. The bowels are often regulated. Sleep and nightly quiet replace sleeplessness, restlessness, and delirium. Diuresis is markedly increased. The color of the urine is lightened and its urates lessened, and it does not grow turbid on cooling. Toxemia, the chief peril to life ac-

cording to some, is most rationally and expeditiously combated. Hence it may be held that a complete milk diet is the basis of any treatment for croupous pneumonia, that all other foods are unnecessary, and that water drinking or water introduced into the circulation in any other manner is needless.

The success of the milk diet depends, in the first place, on the daily quantity taken. The amount must be a standard or measure for the individual. This, for the adult, is from 4 to 6 quarts. With less than four quarts results are not apparent, for to replace or displace the whole blood volume in a human subject requires the daily absorption of the quantity of milk mentioned. A half-pint should be given every hour, or 1 pint every two or three hours. It must be given at night. It should be taken quickly, not sipped. Sipping milk is laborious, and where there is any dyspnea it can be observed that the shortness of breath is greater thereafter.

While the use of a milk diet in disease may be of a simplicity surpassed only in the case of absolute fasting, it may, on the other hand, fail through any one of many practical difficulties or objections.

In medical practice mankind can be divided into two classes: First, that of milk drinkers, who take milk readily in any amount —and this is true of all periods of adult life. This class is easier to cure in any form of disease than the second, while holds milk drinking in aversion. Here one encounters volleys of objections from both sexes: It is not liked, it can not be taken, too much was given in some previous illness, it causes biliousness, it constipates, it causes vomiting, it causes diarrhea, all city milk is unclean, the milk on a farm is the only kind to drink, death is preferable, and the like objections, complaints, and opposition, with or without rational cause or defense. In this class of people the milk diet is mostly unsuccessful and even where the medical attendance has been good, where milk finally has been unwillingly and ungraciously taken by the patient, and where the outcome is a prompt and complete cure, gratitude is never in such a case a part of the practitioner's reward.

In some instances the pure milk diet must be altered by dilution of the milk with barley or rice water. A thick gelatinous liquid is prepared by boiling and stirring for ten or fifteen minutes 1 or 2 teaspoonfuls of barley or rice flour in a pint of water. To this, 1 or 2 volumes of scalded milk are added. Eight to 12 pints is the daily quantity required.

Cows' milk can not be administered to every pneumonic, however willing he may be to make the attempt. Cows' milk may induce the tympanites so prone to ensue in a grave case, and frequent enough in fatal ones. Where, in the course of milk diet treatment, this complication appears and it can not be overcome in a few hours by castor oil or by oil of turpentine enemata, barley or rice water must be given instead. Cows' milk in some subjects produces very active purgation, so marked that at the first complaint of this by the patient, the same change in the feeding is necessary. Where, in a case placed upon a milk diet, ,there is heart palpitation, gastric pain and distress, restlessness, and much belching of gas, the condition is a nervous dyspepsia or indigestion from enfeebled circulation due to more or less obvious organic heart weakness, and the immediate replacement of pure milk with that diluted as already described is necessary.

In rare but undoubted cases, milk causes vomiting, either as soon as taken or else after longer intervals, once or twice a day, in large amounts, consisting of liquid or coagula, or both. The first accident is an idiosyncrasy, the other evidence of an overloaded, distended stomach—one not digesting. Either occurrence necessitates the stopping of this food. If, with a reckless or inexperienced hand, the pure milk is continued in the second instance, acute gastric dilatation may occur—an accident either very grave or fatal.

The treatment of pneumonia with a pure milk diet is not new as regards the food selected, but the above presentation is new in that there are stated the principles of its use, its effects on the disease, the essential daily amount, the objections to it, its occasional dangers, its proper administration at the bedside, and its permanent necessity whatever other treatment may be used or

added. The whole subject has been offered and considered in atonement for the startling, chilling words of an old master in therapeutics in the first paragraph of this paper.—*Monthly Cyclopedia and Medical Bulletin.*

Extracts from Home and Foreign Journals.

SURGICAL

Epinephrin Content of Adrenals After Various Anesthetics.

Report of experiments on dogs to determine the effect of ether and chloroform anesthesia on the epinephrin contents of the adrenals. The decrease after chloroform proved to be much greater than that after ether, and persisted for a long time, while after ether the adrenals became normal again in ten to twelve hours. When morphine was given before chloroform, it seemed to delay the bad effects on the adrenals, but only so long as the morphine influence continued. After that the epinephrin contents was persistently lowered, as in the cases where morphine was not given. Morphine given before ether did not seem to make any special difference in the effect of the anesthetic. Thus, chloroform, is much the more toxic than ether in that it inhibits the tonic effect of epinephrin on the sympathetic nervous system. Delbet believes that most of the serious after-effects of chloroform anesthesia can be prevented by giving epinephrin.—*Monthly Cyclopedia and Medical Bulletin.*

Open Treatment of Suppurating Wounds.

Schede asks what is the use of trying to keep profusely suppurating wounds bandaged. The body is striving to throw off infected secretions, and why can not we help it in this task instead of our futile efforts to staunch the copious discharge. Oftener than not, the dressings directly hinder instead of promoting Nature's efforts, while the changing of the dressings threatens the environment. An illustration shows the two plaster casts and iron

strip frame between, with which he secured the rapid healing of severe shrapnel injuries of the leg. Almost at once the secretions lost their fetid odor and purulent character, the fever subsided, and necrotic tissue was cast off by healthy granulations. When the secretions are too thick to drip, he steams the wound under a cover and thus obtains a "moist dressing" without the drawbacks of shutting off the air and retention of secretions. In other cases superheated air answers the purpose better. If the suppurating focus is on the top of the leg, he provides for drainage by a counter incision in the depths of the lesion. The great advantage of this plaster-cast open method, he reiterates, is that each lesion can be treated as it needs, open or covered, moist or dry, aseptic, and it can be bandaged at any time when the healing has propressed to render this desirable. The plaster and the iron cost far less than the constantly to be renewed dressings with such a lesion, while the patient is spared all the pain and discomfort of change of dressing.—*The Journal of the Am. Med. Assn.*

New Method of Hastening Repair After Fracture.

Kauffer makes use of homogeneously granulated bone incorporated with petrolatum, injected into and between the fractured ends of bone, to encourage repair in fractures, especially in cases of delayed union. A piece of bone (a fresh speciment obtained from the morgue) is dried and ground up to a powder, mixed with petrolatum to a consistence of bismuth paste, sterilized by placing in a large bottle, which is placed up to the neck in water and boiled for two hours. Keep in a cool place. When required, it should be warmed and well mixed by shaking, taken up into a 4 or 8 c.c. syringe, using a long needle, with a bore about gauge 20.

After the fracture has been extended and approximated, it is located by digital examination and Roentgen ray; the needle is introduced through the skin and fascia to the seat of fracture, the rough edges of which are readily appreciated. The needle is then passed as deeply as possible between the fractured ends. The contents of the syringe are injected as the needle is slowly with-

drawn to the surface of the bone, when injecting must stop and the needle be removed. This procedure may be repeated into the fracture at several angles, if necessary, thus infiltrating the entire mass between the fractured ends with petrolatum and bone cells, which act as a focus for osteogenesis. The powdered bone and petrolatum are also recommended wherever bone is required. Kauffer says that the powdered bone invites calcareous deposits and encourages a metaplasia of the adjacent tissue cells.—*The Journal of the Am. Med. Assn.*

Powder to Stop Flow of Blood.

It has been announced that Professor Theodor Kocher, winner of the Nobel prize for surgery in 1912,, and his assistant have invented a preparation which will almost instantly stop the flow of blood from a wound. It is a powder, called coagulen, and has to be dissolved in water before being applied to the wound. As it does not require a trained hand for its administration, it is likely to prove of inestimable worth to the nations now at war. Large quantities have been sent to French and German headquarters.—*Virginia Medical Semi-Monthly.*

Surgery of Peptic Ulcer.

Dr. L. Eloesser (*Calif. State Jour. of Medic.,* September, 1914) presents the following conclusions: 1. Acute ulcer is not to be treated surgically unless: (a) perforated; (b) bleeding obstinately, or (c) intractable by medical means. 2. Hematemesis should not be made an indication for operation unless the presence of a bleeding ulcer can be made reasonably sure. A preliminary transfusion of blood will often give time for diagnostic examination and benefit the patient meanwhile. 3. Chronic callous ulcers suspicious of malignancy should be treated by resection and gastro-enterostomy. 4. Chronic ulcers of evident innocence should be treated by gastro-enterostomy with or without pyloric closure. The results of resection are not sufficiently better than those of gastro-enterostomy to compensate for the added

risk. 5. Gastric procedures should not be carried out unless indicated by clearly demonstrable gastric lesions. 6. At all operations for peptic ulcer the abdomen should be carefully examined for extra-gastric irritative or infectious processes. The treatment of these may be more important causally than the treatment of the ulcer itself. 7. Our gastric operations are not causally but symptomatically therapeutic. Prolonged post-operative medical care is imperative.—*International Journal of Surgery.*

Treatment of Tuberculosis of the Bladder.

Carmelo Bruni notes that Casper regards instillations of corrosive sublimate in a strength of 1 to 10,000 gradually increased to 1 to 2,000 as the best local remedy in this condition. The painful reaction following these installations frequently demands the use of opiates. The author has had little success with the above method of treatment and prefers the use of gomenol, which is particularly advantageous because of its analgesic power. It is used in a 10 per cent strength mixed with a bland oil and may be instilled daily. Another good remedy is guiacol, which is a powerful analgesic and is instilled, as in the following formula:

℞ Iodoform, 1 gram,
Guaicol, 5 grams,
Sterile olive oil, 100 grams.

It should be bourne in mind that nitrate of silver, which is the best topical application in other forms of cystitis, is injurious in the tuberculous variety.—*Medical Record.*

Union in Function in an Almost Completely Severed Hand.

Schloessman, of Tubingen, in Munch. Med. Wochenschr., No. 26, 1914, reports the case of a man who had his hand injured in a machine. The only uncut portion was a strip of skin three cm. wide in which the ulnar nerve, the artery and possibly the vein and flexor and extensor carpi ulnaris were present. The cut ex-

tended through the semi-lunar navicular and the joint end of the radius and ulna. Six hours after the injury, under general anesthesia, twenty-two sutures were applied in the severed tendons. The median nerve was sewed. The radial simply placed in apposition, because from the peripheral end there was some oozing. There was healing without much inflammatory reaction.

After six months there is present at the wrist joint one-half the normal dorsal flexion, ulnar flexion was diminished one-fourth. Extension and flexion at the proximal joint of the thumb was reduced, the index finger showed some diminished extension. There are no disturbances of sensation. The thumb and index finger are somewhat livid. In the treatment passive and active motion were commenced on the eleventh day. Motion reappeared in the areas of both nerves at the same time, although the radial nerve was not united. This substantiates the experiments of Boeke and Feiss, that even without suture there may be nerve union if the ends are placed in apposition.—*The Lancet-Clinic.*

Use of Iodine in Emergency Wounds.

Thyng (*Northwest Medicine,* March, 1914) observes that in the first treatment of urgent surgical wounds, tincture of iodine is used in about 90 per cent of all clinics, the remainder being divided among bichloride, benzin, alcohol, and hot water. The principle underlying all first treatment in urgent work is not to try to kill the bacteria present but to limit their spread and growth. If a wound be already infected water or watery solution is the worst thing that can be applied, and tincture of iodine or any other solution will not destroy the infection. It can only do injury to the tissue. Fresh blood is the best healing material that can be left in the wound.

Disinfectants do not belong to the first dressing. Hecht and Kohlir have shown that the growth of staphylococci is not retarded to any extent when rubbed up with blood and tincture of iodine. Thyng believes that in the next couple of years the profession will have discarded iodine and adopted the views of Prof.

A. von Eiselsberg. He advocates the dry treatment with nothing but absorbent, sterile gauze, and says that if the surgeon is not situated so that he can wash his hands thoroughly, not to wash them at all, for the moisture and scrubbing will only get the bacteria loose so that they will more easily get into the wound. Do not touch the wound at all with the hand.

Konig reports that he treated 250 cases of open wounds with no cleansing whatever and only had delayed healing in two, and very vigorously warns against the use of iodine. Von Eiselsberg says that, after twenty years of observation, washing of wounds with water or some fancied solution is the cause of the larger percentage of infections.—*The Therapeutic Gazette.*

MEDICAL

X-Ray Treatment in Exophthalmic Goiter.

The writer reports treating sixteen cases of exophthalmic goiter with the X-rays. All left improved, some apparently cured. He suggests that exophthalmic goiter, the symptoms of which are apparently due to excess of thyroid secretion, is itself due to sympathetic irritation, and that Addison's disease is also due to this cause, pointing out certain features which he thinks, are common to both these diseases—pigmentation, irritable heart, digestive disturbances, etc. Cases of diagnosed Addison's disease which recover are due to the improvement in the sympathetic system. Early treatment of all cases showing symptoms of exophthalmic goiter with the X-rays is recommended.—Fenwick in *Australian Medical Journal.*

Summary of Results from 600 Intravenous Injections of Neosalvarsan.

The *Journal of the Michigan State Medical Society* for August, 1914, contains an article by Holmes in which he says that judg-

ing from the result of these six hundred injections, it seems justifiable to draw the following conclusions:

1. The intravenous administration of neosalvarsan in selected cases is without danger.

2. Danger is minimized by the method making sure of a concentrated hypertonic solution.

3. Danger is minimized by keeping the patient under hospital supervision while undergoing treatment.

4. In the absence of a large number of spirochetæ, a certain amount of reaction is inevitable after the first injection. This reaction is of no importance.

5. A reaction of sensitization is excited in a smaller number of cases.

6. The small number of untoward results is due to care in selecting cases, proper dosage and asepsis in administration.

7. While neosalvarsan has not proved as potent as old salvarsan, it is highly efficient and may be used more often and in larger doses.—*The Therapeutic Gazette.*

Blood Threadlets.

Upon the introduction of dark field illumination into medical microscopy peculiar threadlike bodies were described as visible in the blood, in which fluid they floated with a wave-like spontaneous movement between the blood corpuscles. They were variously regarded as artefacts and parasites. Apparently a constant blood find of man and warmblooded animals their number was much increased in certain diseases, notably acute general infections. As the numerous data concerning the incidence of these bodies in the blood have never been collected and systematized, and as the subject has fallen into more or less neglect, Knack attempted to revive interest therein, in a paper read before the Biological Section of the Aerztlicher Verein of Hamburg last summer (*Münchener medizinische Wochenschrift*, October 6). He described a simple method of rendering the bodies visible, but was unable to account for their presence. The only hypothesis held at present is that they are derived from the disintegration of

red blood cells, and represent a myelin form set free from the cell lipoids. He pointed out that the threadlets could not be derived from the blood fibrin.—*Medical Record.*

The Technic of the Intradural Injections of Neosalvarsan in Syphilis of the Nervous System.

While it is an undeniable fact that in syphilis of the nervous system the intravenous injection of neosalvarsan is capable of producing subjective improvement, nevertheless the peculiar isolation of the nervous system, and the relative impermeability of its membranes render treatment directed toward this system of little actual avail except subjectively. In tabes the pains are frequently ameliorated, the gait is improved, and in rare instances optic atrophy is said to have been arrested by the intravenous injection of salvarsan. (Udo J. Wile, *Journ. A. M. A.,* April 11. 1914).

The intradural injection of old salvarsan is impossible, on account of its caustic action, from the presence in it of the caustic soda necessary to render it neutral. After the injection of neosalvarsan into the spinal canal, it was observed that the patients suffered extreme headache, vomiting, extreme neuralgic pains in the legs, and occasional troubles of urination, all associated with a rise of temperature.

The solution used by Wile is a 6 per cent solution of neosalvarsan in distilled water. This solution is hypertonic. Each drop of such a solution would contain 3 mg. of neosalvarsan. The dosage injected is from 3 to 12 mg.; that is, from 1 to 4 drops of the solution. The solution is made up as follows:

An ampule containing 0.3 gm. of neosalvarsan is dissolved in 5 c.c. of freshly distilled water. If the ampule contains 0.6 gm., 10 c.c. of water are used. In both solutions each drop will contain 3 mg. of the drug. The syringe employed for the injection is accurately graduated in drops. The patient is then placed in a position for a lumbar puncture, either sitting or lying, according to the choice of the operator. The puncture is then made with a needle, the end of which fits the graduated syringe. After

a few drops of spinal fluid have flowed out of the canula, or a greater quantity if a diagnostic puncture is desired at this time, the syringe is fitted into the needle and fluid is allowed to run back into the syringe barrel, thus mixing with the amount of the drug in the barrel. The mixed spinal fluid and drug is then gently forced into the canal, and slight suction is made on the syringe to withdraw a second amount of fluid, which washes out the needle. This is then reintroduced, the needle is quickly withdrawn and the patient placed in the Trendelenburg position he is allowed to remain for at least one hour. Injections thus given are exceedingly well tolerated. At most there is a slight amount of neuralgic pain which passes off in a short time. For the most part, however, if carried out properly, the injections are quite painless. Vomiting does not occur at all. A slight amount of headache such as accompanies a lumbar puncture is, however, sometimes encountered. A slight tendency to difficulty in urination is occasionally experienced a day or two following the injection.—*Medical Review of Reviews.*

Camphor in Pneumonia.

Markevitch advocates the use of 10 per cent camphorated oil in the treatment of croupous pneumonia in doses of 5 c.c. four times daily or 10 c. c. twice a day of a twice stronger solution. The camphor was given by hypodermic injections combined with digitalis internally. The 226 male patients treated by this method gave 6.6 per cent mortality, while of 322 treated without camphor 13.3 per cent died. In 133 grave cases of pneumonia, 66 had no camphor treatment, with 48 per cent mortality, while of 67 given the camphor as above only 15 died, namely, the mortality rate was only 22 per cent. Camphor thus considerably lowers the death rate. The temperature usually fell by lysis; if a crisis occurred it was generally on the ninth day, instead of the seventh, which fact Markevitch explains by the gravity of the cases treated. Dyspnea is relieved, the respiration becomes quieter and deeper, the temperature subsides in two or three days; there is no delirium; the sputum decreases, the appetite reappears, and with the

improvement of the general conditions recovery sets in. The local pneumonic process is little influenced by this treatment, though the area of consolidation was found diminished. The only by-effects were painful infiltrations at the points of injection, especially when the camphor got into the subcutaneous fat. There was suppuration at the point of injection in only two cases in the four years. Camphor has a bacterial action, it is slowly absorbed, and thus gradually and quietly brings on lysis.—*The Journal of the American Medical Association.*

The Treatment of Tetanus by Large Doses of Chloral.

November 4, Dr. Dammler, chief physician of the army, read a paper on this subject before the Academie de medecine. In 1889 he had occasion to treat a case of tetanus with chloral in doses of from 20 to 25 gm. per day. This procedure was then recommended by Professor Verneuil. At present Dammler administers a dose of 6 gm. of chloral every six hours until the patient is in such a state of torpor that all hyperexcitability from the tetanus is abolished. Professor Capitan recently employed Dammler's method with complete success in a particularly serious case of tetanus.—*The Journ. of the Am. Med. Assn.*

The Signs of Death from Freezing.

It is not clearly understood how severe cold causes death. A variety of causes have been assumed to be at work—accumulation of carbonic acid, paralysis of the vasomotor centers, loss of heat, accumulation of blood in the heart, anemia of the brain, destruction of red corpuscles—all of which tends to show that we really do not know anything definite as to the precise cause. The signs of death caused by exposure to cold are also poorly understood. This is especially unfortunate in view of the fact that in all northern countries cases of death from freezing frequently present themselves for investigation. In Russia, for instance, at least several hundred persons die each year from the immediate

effects of severe cold, and in the Medico-legal Institute in Moscow about 2.5 per cent of all post-mortem examinations concern deaths from freezing. Recently Krjukoff has published the results obtained from a study of the Moscow material with a reference to the signs of death from freezing, and he finds that in 40 per cent of the cases the presence of swollen and glistening bluish-red or bright scarlet-red spots in the skin of the ears, hands or feet were present and that such spots are reliable signs of the action of cold on the living skin. Cerebral and pulmonary hyperemia and edema were frequently found, and the heart commonly was overfilled with blood; but these appearances were not distinctive. Hemorrhagic erosions were found in the stomach in 72 per cent. Krjukoff regards the absence of glycogen and sugar in the liver as a good sign of death from freezing, particularly valuable because both these substances are present in the liver in acute alcoholism.—*The Journal of the Am. Med. Assn.*

The Effect of Quinine in Rabies.

There are few drugs which have received indorsement in so large a number of diseases as has quinine, and there still remain but a few diseases in which it has been proved to possess a definitely beneficial influence. Now and again articles appear in which it is claimed that large doses of quinine are curative in croupous pneumonia, but the general run of the profession does not seem to have taken kindly to this use of quinine,, which is a pretty fair proof that it does not do the good in this disease which some enthusiasts believe. Some time since Moon reported experiments upon the use of quinine in rabies affecting dogs and apparently believed that quinine exercises a curative influence, an opinion which was further supported by certain clinical observations made by Harris. On the other hand, in a report published in the *Journal of Medical Research* for July, 1914, Frothingham and Halliday, as the result of a series of experiments upon the influence of quinine upon rabbits suffering from rabies, concluded that this drug has no curative effect. They also found that the subcutaneous injection of quinine bisulphate and quinine and urea

hydrochloride caused local necrosis with subsequent sloughing. Whether these experiments of Frothingham and Halliday indicate that the observations of Moon and Harris are incorrect as to rabies in general, or whether they only indicate that quinine is useless in rabies affecting rabbits and not dogs and human beings, remain to be determined.

It is an interesting coincidence that after this editorial note was completed a paper appeared in the *Journal of Infectious Diseases* for July, 1914, by Cumming, who has done such excellent work in regard to the use of antirabic treatment. In this paper he finds that there is a total absence of protection by quinine against small doses of rabies virus, even when quinine is given, not only simultaneously with the inoculation and afterwards, but also when it is given before inoculation is practiced.—*The Therapeutic Gazette.*

True Bone in Sputum.

Kretschmer reports a case of this very rare phenomena. The patient, a man of 31, brought to the clinic some pieces of spongy bone which he claimed to have expectorated. He was found to have a pleuritic effusion, probably an empyema. In the sputa were elastic fibers. A slight kyphosis was found, corresponding to the last two dorsal vertebræ. The patient continued to expectorate bone during the observation period. The first diagnosis was abscess of the lung with secondary erosion of the vertebræ, but this opinion was changed to a tuberculous abscess of the vertebræ with rupture of the same into the pulmonary tissue.—*Berliner Klinische Wochenschrift.*

OBSTETRICAL

Incontinence of Urine in Women.

Dr. David Newman (*The Lancet*, October 17, 1914), describes an operation which he has used with success in a considerable number of cases in the last fifteen years. With the patient in the

lithotomy position, the posterior wall of the vagina is depressed so as to expose the anterior wall fully to view. After the bladder has been distended with 12 ounces of boric solution, a straight steel bougie with a knob of the size and shape of a horse-bean is introduced into the bladder, so that the knob locates the neck. By elevating the handle of the bougie the knob is made to throw out the posterior wall of the bladder immediately above the sphincter and project it backwards and downwards. Three sutures, one anterior and two lateral, are now passed through the lips of the os, and the uterus is dragged downwards so as to give a clear view of the anterior vaginal wall. A median vertical incision is made from the uppermost point of the bougie knob downwards over the knob and along the middle of the stem for a distance of 1½ to 2 inches. With blunt-pointed scissors cutting on the flat the mucous membrane and muscular coat of the vagina are carefully separated on both sides of the median incision. The dissection should be made right down to the submucous tissue of the bladder and urethra, but great care must be taken not to expose the vesical mucous membrane itself. The vaginal mucous membrane is removed over a lozenge-shaped area, the center of which corresponds with the position of the most prominent part of the knob of the bougie; the upper angle is just over the point of the instrument. The lower angle corresponds with the stem, while the two other angles point outwards, one on either side. Incisions are now made to join the apices, and a lozenge-shaped portion of vaginal mucous membrane is removed, exposing a corresponding area of raw surface, the floor of which covers the neck of the bladder and the first half inch of the urethra. The next step of the operation consists in building up a dam to prevent the too easy escape of urine. The successful construction of this mechanical obstruction depends upon heaping up a bank of mucous membrane on the vesical side of the septum and supporting it by tightening the structure behind—those on the vaginal side. Make the first redundant, the second scant. The raw surface exposed is about one and a half inches in length from above downwards, and from side to side three-quarters of an inch. The broadest part of the lozenge is over the neck of the bladder.

The next stage of the operation is the suturing. The bougie is still in position. The sutures are chromic catgut and are introduced as follows: On the left lip of the wound the needle is passed from left to right; it enters immediately under the vaginal mucous membrane to come out one-eighth of an inch to the left side of the center line of the bougie; it is then carried over the rawed surface to one-eighth of an inch beyond the right side of the bougie, where it penetrates the tissue, to be brought out on the right lip of the wound. Six sutures are passed in this way. The bougie is now withdrawn, and the sutures are tied, cut and buried. A second row of fine gut sutures is applied to unite the margins of the wound in the vaginal mucous membrane, and the operation is completed.—*International Journal of Surgery.*

Korsakow's Psychosis Occurring During Pregnancy.

Henderson reports two cases. The first case may be summarized as follows: A multipara, aged 31 years, in the first month of her second pregnancy started to suffer from nausea and vomiting, and rapidly lost in weight. She then complained of numbness and weakness in the feet, legs and hands. She became depressed, started to fabricate, lost trace of time, and was getting worse so rapidly that an abortion was performed when the patient was three months pregnant. A delirium with fear reaction ensued, she lost power in her hands completely, had incontinence of urine and feces, aphonia, paralysis of the diaphragm, and, probably, also at this time tachycardia. On admission to the hospital the patient was delirious and showed the characteristic symptoms of a generalized polyneuritis. In addition, she had a double adductor paralysis of the vocal cords, and involvement of both the phrenic and vagus nerves. During her hospital residence the striking points in her mental condition have been the exceedingly poor power of retention, the tendency to confabulate, and the unstable emotional condition. Both mentally and physically a wonderful improvement has resulted.

The second case differs from the first in that the psychosis was not accompanied by any polyneuritic symptoms.

The points on which Henderson especially lays stress are: The pregnant state must in certain cases be recognized as an important etiologic factor in the production of peripheral neuritis, and of that condition known as Korakow's syndrome. The neuritis caused may be either (1) local, that is, affecting one nerve or one limb, or (2) diffuse, that is, affecting all the limbs and certain of the cranial nerves. The mental disorder characteristic of the condition is usually associated with a generalized polyneuritis, but, as evidenced by one case reported here, it may occur alone. The frequent history of hyperemesis gravidarum in association with the generalized forms of the disorder is so striking that it suggests a possible line of approach as to the elucidation of the nature of the toxin. Those patients who in previous pregnancies have suffered from severe vomiting, or other serious toxic phenomena, should be strongly urged to avoid any further pregnancies.—*Journal of the Am. Med. Assn.*

Tubal Abortion.

Mrs. P., aged thirty-two, seen in consultation with Dr. R. Ingram, November 13. Her condition at that time was that of pelvic peritonitis (specific in origin), the infection extending over a period of six months. She was the mother of one child, aged four. She had been very well before her marriage; had suffered no pain or discomfort at her menstrual periods, and had had no discharges between them. Her periods were always regular.

The onset of her present condition was six weeks ago, when she had what she believed to be a return of her former trouble. She did not consult her physician at that time, but contented herself by rest in bed, laxatives and hot vaginal douches.

Yesterday she entered the Good Samaritan Hospital for the purpose of an operation directed towards the relief of the pelvic inflammation. At operation, performed this morning, the following conditions were revealed: On the right side the tube and ovary were found by adhesions. The tube was thickened and contained some exudates within its lumen. The left tube showed the remains of a previous tubal abortion from its fimbriated end.

The extruded embryo was found in the pelvic cavity. There was very little free blood present in the peritoneal cavity.

The interesting features of the specimen here presented are the facts, first, that the left ovary shows a very small fibroma within its walls, and, second, that the tube shows an obstruction and fibrous overgrowth just at the junction of the tube and the uterus. The fimbria has attached to it some remnants of the embryo. There can be no doubt but that this was a case of tubal abortion, unrecognized at the time of extrusion. The symptoms occurring from it were very mild, and they were completely masked by the previous inflammatory pelvic conditions. Hemorrhage and pains were so mild that she was not required to consult a physician for relief.—*The Lancet-Clinic.*

Insanity and Amenorrhea.

A patient, when seen 21 years old, was anemic and constipated, and had suffered from melancholia for three years, during which time she had menstruated twice only, very scantily and with great pain. After more than twelve months of treatment, which included curetting, she was placed in an institution, where she spent a year. She was then found to be suffering from religious mania with amenorrhea, was occasionally vicious, and at such times refused food. It was decided to remove an ovary and to substitute for it a more normal organ taken from a sane person. A hysterectomy upon another patient provided the required material, which after removal was placed in Ringer's solution at blood heat. Four and a half hours later the abdomen of the insane woman was opened. Both ovaries were small, hard, pale, and cirrhotic. The more abnormal of the two was removed, the broad ligament on that side split, and the new ovary, cut into three slices, was embedded in the nest thus provided. Recovery was uneventful, and twenty-four days after the operation a normal, painless, profuse menstruation took place. The mental condition improved rapidly, and in six months the patient was dismissed to her home. She was then menstruating regularly, had put on 6 pounds in weight, and was exceptionally bright and happy. She declared her inten-

tion of doing her utmost to repay her parents for the trouble and expense of her treatment; in a word, her insanity had entirely vanished. J. W. Dunbar Hooper in *Australian Medical Journal,* November, 1913.

End-Results After Operation of Displacement of Uterus, Bladder and Rectum.

The body of the uterus was replaced to its proper position in the pelvis by the abdominal route combined with some sort of vaginal repair in sixty-one cases. Of the 109 cases investigated by Wade, twenty-four were made by application of the round and broad ligaments on the upper and anteriar surface of the body of the uterus, according to the method of Coffey, combined with some form of repair of the cervix or of the vagina. The operation has been fairly satisfactory. In twenty-one cases the patient has had a restoration of the pelvic viscera to their proper position, and in twenty of the cases the patient felt an improvement after the operation. Five became pregnant subsequently; one miscarried at the twenty-fourth week of her pregnancy; four went to term and were delivered vaginally of living children.

The uterus was suspended by plication of the round and broad ligaments without the aid of vaginal surgery in three cases. The uterus was movable and in place in two cases, and in two cases the patients felt improved after the operation. One became pregnant subsequently, carried her pregnancy to the twelfth week, and then aborted. The uterus was suspended from the anterior abdominal wall with No. 2 chromic catgut combined with some form of vaginal repair in thirty-three cases. The uterus remained in its proper position in twenty-three cases. In twenty of the cases the patient felt some improvement after the operation; nine women became pregnant and eight were delivered of living babies; one died. The uterus was suspended from the anterior abdominal wall without repair of the vaginal tract in seven cases. One became pregnant; three felt better after the operation,, and in five cases the uterus was in place and appeared to be movable.

Four cases of the Baldy or Webster method suspensions com-

bined with a repair of the vaginal canal were investigated. Two of the patients showed the uterus movable and well placed, and two felt some improvement after the operation. None of the patients had become pregnant. The vaginal method of supporting the uterus, and with it the bladder and rectum combined with the suspension from above, has been satisfactory to the patient in forty-two of the sixty-one cases examined. The uterus has remained in position and has been movable in fifty of the cases; fourteen of the patients became pregnant; two aborted; ten had normal deliveries and two were delivered by the aid of forceps. Thirty-six of the patients had the uterus supported by repair of the posterior vaginal wall without suspension; twenty-eight of these women felt improved after the operation, and in thirty cases the uterus was movable and in good position. The prolapse of the rectum was relieved in ten of the cases examined. The bladder in fifteen cases, in which it was involved in the procidentia, was placed in its proper position in the pelvis in nine cases. Eight of these women became pregnant after the operation. The mobility of the uterus has never been interferred with when replacement was affected by support from below, and flexious of the body on the cervix has not resulted from the operation. One death occurred which was probably due to cardiac embolism.—*The Journ. of the Am. Med. Assn.*

Experience with Abderhalden's Dialysis Procedure.

Otto and Blumenthal of Professor Loeffler's Institute have been testing the Abderhalden reaction with special reference to the diagnosis of pregnancy and to the behavior of precox patients towards testicular substance. The placental substratum was prepared with extreme care, but was broken up by sera of non-gravid women and by that of cancer patients. The test is very valuable to this extent that when it is negative pregnancy can be excluded with great probability. The test is almost positive in the gravida, but the percentage of positives is equally high in cancer patients and positive finds are common in miscellaneous affections. A perfectly negative result appears to indicate freedom from disease

in general, and from pregnancy in female subjects. The test is not well suited for routine general practice. When the tests are used as substratum the serum of precox patients gives positive results in a very high percentage of cases. The same result is seen in the gravid, in manic-depressives and miscellaneous subjects in a sometimes high but very variable percentage. Precox serum breaks up placenta even more frequently than testicle. It therefore seems likely that in atypical or incipient precox positive finds with testes and placenta should possess considerable diagnostic significance. In a second brief article on the A. R. by Eder of Koblanchk's clinic, similar conclusions are reached. With a negative A. R., pregnancy can be excluded with the highest degree of probability. On the contrary, with positive A. R., we have to exclude at least the presence of cancer, syphilis, and suppurative processes before we can pronounce a woman pregnant.—*Medical Record.*

Corpus Luteum and Menstruation.

Seitz, Wintz and Fingerhut in the *Munchener medicinische Wochenschrift,* August 4, 1914, discuss the relation of the corpus luteum to menstruation. Their study led to the following conclusions:

Menstruation is dependent on the function of the corpus luteum. The latter contains two substances, a luteolipoid, and lipamin, a lipoproteid. The first has hemostatic properties, and if introduced subcutaneously before and after menstruation will reduce the flow and shorten the period. The second represents a lipoproteid, a lecithinalbumin, in fact. In animal experimentation this substance stimulates the development of the genitals. Subcutaneous injections of it administered to amenorrheic subjects will induce menstruation. The therapeutic effect of the luteolipoid is excellent in puberal hemorrhage as well as in menorrhagia of non-organic origin. In climateric hemorrhages it is of value only in the presence of retarded blood coagulation, and it is entirely useless in hemorrhages of an inflammatory nature. Indeed, in myoma it

produces a temporary increase in the flow. In dysmenorrhea accompanied by profuse bleeding it eases the pain.

Lipamin, of persistently applied, will induce menstruation in amenorrheic subjects. It would be perfectly justifiable to attempt to correct hyperplasia of the genitalia by prolonged injections of lipamin. In dysmenorrhea with a scant flow, it seems that the injections, if applied before the monthly period, will not only alleviate but prevent pain.—*The Therapeutic Gazette.*

Intra-abdominal Hemorrhage Complicating Normal Pregnancy.

F. G. Balch and R. M. Green conclude that intra-abdominal hemorrhage complicating normal pregnancy is exceedingly rare, but apart from trauma may arise from various unusual causes. In the presence of classical signs of internal concealed bleeding during the later months of pregnancy, a diagnosis of such hemorrhage from unknown cause should unhesitating be made and appropriate treatment instituted. Among the possible rare causes of intra-abdominal hemorrhage complicating normal hemorrhage pregnancy may be congenital angioma or varix of the uterus. The presence of such a varix may be a cause of habitual antecedent dysmenorrhea for which no other evident anatomical or physiological cause can be found and which is unaffected by treatment. In the grave exsanguination following intra-abdominal hemorrhage associated with normal pregnancy, as in the commoner obstetrical complications of placenta previa, postpartum hemorrhage, and ruptured tubal pregnancy, transfusion is a live-saving procedure of proved value and should be promptly employed as soon as the source of bleeding has been checked.—*Med. Record.*

Editorial

PUBLISHER'S NOTICE—The Journal is published in monthly numbers of 48 pages at $1.00 a year, to be always paid in advance.

All bills for advertisements to be paid quarterly, after the first insertion of the quarter.

Business communications, remittances by mail, either by money order, draft, or registered letter, should be addressed to the Business manager, C. S. Briggs, M. D. corner Summer and Union Streets, Nashville, Tenn.

All communications for the Journal, books for review, exchanges, etc., should be addressed to the Editor.

TO OUR READERS.

With the December number of the Journal another volume is completed—the sixty-third milestone in its life journey. A word to those who receive the Journal. The mailing list contains quite a number of names of subscribers who are somewhat in arrears. These names will have to be dropped from the list unless notified to the contrary. We urge upon our friends who receive the Journal to write to us at once, ordering the subscription continued or dropped as they may wish. It will only take a moment from a busy practitioner's time to write a letter or a postcard, and this courtesy the Journal is entitled to. We therefore insist that every one receiving the Journal communicate with us promptly. Of course we would be glad if every subscriber would continue his subscription, but we would esteem it a favor if he does not desire to receive the Journal that he write to us signifying his position.

In this connection we may call attention to the fact that sample copies of each issue of the Journal are being mailed to physicians throughout the South and to the fact as indicated in the advertising pages that a handsome premium in the shape of a first-class clinical thermometer, itself worth the price of a subscription, is given to each new subscriber. We hope many will take advantage of this excellent advantage of this excellent offer. The Journal invites its friends to send us articles for publication, reports of cases, proceedings of local societies and papers or cur-

rent medical topics. Every physician has something of interest to his brother physicians that should be published and the pages of this periodical are always open for the presentation of such matter. We shall continue in the forthcoming volume of the Journal as in the past to present an independent medical periodical that will be of practical value to every practitioner of medicine. On the threshold of a new year we salute our readers and extend to them everyone a merry Christmas and a happy New Year.

Extract from an editorial which appeared in the *Bristol Herald Courier:*

"If then, capital punishment is not a deterrent of crime, as shown by the fact that its abolition in a number of States has not been followed by an increase of crime, what excuse has civilization to offer for maintaining the gallows or the electric chair? Is it that we demand a life for a life out of a spirit of vengeance that is supposed to have no part in the administration of our penal laws? This is a question which an increasingly large number of people are asking and which is finding an answer in a constantly growing opposition to the death penalty."

This postal is sent you with the wish that it will help to keep the opposition growing. DUKE C. BOWERS.

Reviews and Book Notices

"The Backward Baby"—A Treatise on Idiocy and the Allied Mental Deficiencies in Infancy and Early Childhood. By Herman S. Sheffield, M.D., New York. Fellow of the New York Academy of Medicine and the Am. Med. Assn.; Author of Modern Diagnosis and Treatment of Diseases of Children, Pediatric Memoranda, and the Baby's Record and Health, and Co-Author of Practical Pediatrics. Formerly Medical Director, Beth and David Hospital, Instructor in Diseases of Children, New York Post-Graduate Medical School and Hospital, and Associate Babies' Hospital (O. P. D.). Visiting Physician to the Philanthropin Hospital and the Northwestern Dispensary, Etc.

Awarded the Alvarenga Prize of the College of Physicians of Philadelphia, July 14, 1914. With twenty-two original illustrations in the Text. New York. Rebman Co., Herald Square Building, 141-145 W. 36th Street.

This is a prize essay "the aim of which is to present to the profession a practical survey of the etiology, pathology, diagnosis and treatment o fthe diverse mental deficiencies as they occur in children under five years of age." We feel sure that this little work will be productive of much good to those whose work has to do with the betterment of backward children and to such we cordially commend the work as a most useful guide and help.

"Salversan Treatment of Syphilis in Private Practice," with Some Account of the Modern Methods of Diagnosis. By George Stopford-Taylor, M.D., M. R. C. S., and Robert William Mackenna, M.A., M.D., B.Ch., Physician to the Liverpool Skin Hospital. New York. Rebman Co., Herold Square Building, 141-45 West 36th Street.

This is a most timely brochure upon a most important subject evidencing the conclusions of two painstaking observers after more than three years use of salvarsan in the treatment of syphilis in private practice. The work is divided in the following chapters: Chapter I, The Cause of Syphilis; Chapter II, New Light on Parasyphilitic Disease; Chapter III, The Treatment of Syphilis with Salvarsan; Chapter IV, Combined Treatment of Syphilis with Salvarsan and Mercury. The work is fully illustrated. The text is clear and the method of administration care-

fully described. Every physician should have a copy of this book as though at the present time an everyday procedure, it is not always administered properly and as a result disaster not infrequently follows.

"Progressive Medicine"—Vol. XVI, No. 4. $6.00 Per Annum. December, 1914. Lea and Febiger. Philadelphia and New York.

This number of the series contains most instructive and interesting material. The contributors to this volume are Joseph C. Bloodgood, M.D., Charles W. Bonney, M.D., John Rose Bradford, M.D., Edward H. Goodman, M.D., and H. R. M. Landis, M.D. The contents are as follows: Diseases of the Digestive Tract and Allied Organs, the Liver, Pancreas and Peritoneum. Diseases of the Kidney, Genito-Urinary Diseases, Surgery of the Extremities, Shock, Anesthesia, Infections, Fractures and Dislocations and Tumors. Practical Therapeutic Referendum Index. We urge upon all our readers to subscribe for this quarterly, as every number brings fully abreast with the times all new things, discoveries and advances in the whole department of medicine.

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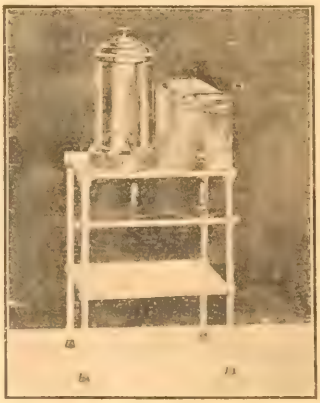

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